FAR EASTERN ECONOMIC REVIEW

Price $1.60 Per copy

Vol. XII. Hongkong, January 10, 1952. No. 2

THE HONGKONG & SHANGHAI BANKING CORPORATION.

(Incorporated in the Colony of Hong Kong)
The Liability of Members is limited to the extent and in manner Prescribed by Ordinance No. 6 of 1929 of the Colony.

Capital Authorised	Hong Kong $20,000,000
Capital Issued and Fully Paid Up	Hong Kong $20,000,000
Reserve Fund	Sterling £6,000,000
Reserve Liability of Members	Hong Kong $20,000,000

Board of Directors

Hon. Sir ARTHUR MORSE, C.B.E. Chairman,
C. BLAKER, Deputy Chairman,
J. D. ALEXANDER — H. J. COLLAR, C.B.E.
H. D. BENHAM, — E. R. HILL,
J. A. BLACKWOOD, — J. H. KESWICK, C.M.G.

HEAD OFFICE:— HONG KONG
Hon. Sir ARTHUR MORSE, C.B.E., Chief Manager

BRANCHES:

BURMA
Rangoon
CEYLON
Colombo
CHINA
*Amoy
*Canton
*Dairen
*Foochow
*Hankow
*Harbin
*Moukden
*Nanking
Peking
Shanghai
*Swatow
Tientsin
*Tsingtao
DJAWA (JAVA)
Djakarta
Surabaja
EUROPE
Hamburg
Lyons
HONG KONG
Hong Kong
Kowloon
Mongkok
INDIA
Bombay
Calcutta
INDO-CHINA
Haiphong
Saigon
JAPAN
Kobe
Osaka
Tokyo
Yokohama
MALAYA
Cameron Highlands
Ipoh
Johore Bahru
Kuala Lumpur
Malacca
MALAYA (contd.)
Muar
Penang
Singapore
Singapore (Orchard Road)
Sungei Patani
Teluk Anson
NORTH BORNEO
Brunei Town
Jesselton
Kuala Belait
Sandakan
Tawau
PHILIPPINES
Iloilo
Manila
THAILAND
Bangkok
UNITED KINGDOM
London
U.S.A.
New York
San Francisco

* Branches at present not operating

LONDON OFFICE:— 9, Gracechurch Street, E. C. 3

Banking business of every kind transacted.

A comprehensive service as Trustees and Executors is undertaken by the Bank's Trustee Companies in
HONG KONG LONDON SINGAPORE.

MACKINNON, MACKENZIE & CO.

HONG KONG

MACKINNON, MACKENZIE & CO. (CHINA) LTD.
SHANGHAI, KOBE & YOKOHAMA

as Agents of

Peninsular & Oriental S. N. Co.
British India S. N. Co., Ltd.
Eastern & Australian S. S. Co., Ltd.

will be glad to assist with Passages and Freight space

To

STRAITS AND CEYLON
INDIA AND PAKISTAN
EAST AFRICA AND PERSIAN GULF,
RED SEA AND MEDITERRANEAN PORTS
UNITED KINGDOM AND CONTINENTAL PORTS.
AUSTRALIA. NEW GUINEA
AND
NEW ZEALAND

For Further Particulars
Phone or Call

P. & O. Building, 27721 HONGKONG.
27 The Bund. 11428 SHANGHAI.

Pacific Far East Line, Inc.

FAST REGULAR TRANS-PACIFIC SERVICE

DIRECT
SAN FRANCISCO LOS ANGELES
WEST BOUND-SAN FRANCISCO/HONG KONG

OVERLAND
NEW YORK-CHICAGO-DETROIT-TORONTO.
MONTREAL AND ALL AMERICAN & CANADIAN CITIES
EAST BOUND-HONGKONG/SAN FRANCISCO

Sail San Francisco/ Los Angeles	Discharge Hongkong	Vessel	Voy.	Loading Hongkong	Arrives San Francisco/Los Angeles
Dec. 27	Jan. 20	s.s. FLYING SCUD	40	Jan. 21	Feb. 6 San Francisco & Los Angeles
——	Feb. 1	s.s. JACOB LUCKENBACH	9	Feb. 2	Feb. 18 San Francisco & Los Angeles

REFRIGERATION-DRY CARGO-CARGO OIL TANKS

SUBJECT TO CHANGE WITHOUT NOTICE.

For full particulars call General Agents, **UNITED STATES LINE COMPANY** Queen's Building, Telephone 28106

THE MERCANTILE BANK OF INDIA, LIMITED

(REGISTERED IN LONDON, UNDER THE COMPANIES ACTS OF 1862 TO 1890, ON 2ND DECEMBER, 1892)

有利銀行

Authorised Capital	£3,000,000
Subscribed Capital	1,800,000
Paid-up Capital	1,050,000
Capital and General Reserves	1,350,000

Head Office: 15, Gracechurch Street, London, E.C. 3. Agents in New York: Bank of Montreal, 64, Wall Street

Branches & Agencies:

INDIA	PAKISTAN	BURMA	MALAYAN FEDERATION	HONG KONG
Bombay	Karachi	Rangoon	Kuala Lumpur	JAPAN
Calcutta	Chittagong		Kuantan	Tokyo
Howrah	CEYLON	MAURITIUS	Kuala Trengganu	Osaka
Delhi	Colombo	Port Louis	Penang	CHINA
Madras	Galle		Kota Bharu	Shanghai
	Kandy		Ipoh	SIAM
	Jaffna	SINGAPORE	Kuala Lipis	Bangkok

D. BENSON, Manager, Hong Kong.

BANKING BUSINESS OF EVERY KIND TRANSACTED
CORRESPONDENTS THROUGHOUT THE WORLD
TRUSTEE AND EXECUTORSHIPS UNDERTAKEN BY THE BANK'S TRUSTEE COMPANIES.

ROYAL INTEROCEAN LINES.

Regular freight and passenger—services
to East—& South AFRICA
and South AMERICA
with the wellknown luxury-liners
M.S. "BOISSEVAIN"
"TEGELBERG"
"RUYS"
Holiday—ROUNDTRIPS to JAPAN
with the above passenger—vessels,
Duration: about 16 days
Fares on application

Also regular freight & passenger—services
to Singapore
and Indonesia
Tourist—ROUNDTRIPS to the
beautiful island of BALI
Duration roundtrip about one month,
with about one week in BALI

Agents: **HOLLAND EAST ASIA LINE.**

Far East—Europe v.v.

HONGKONG
King's Building, ground floor.
Telephone: 28015—28016—28017.

THE CHARTERED BANK OF INDIA AUSTRALIA & CHINA

Incorporated in England by Royal Charter, 1853.

Capital, Stock, Authorised & Issued	£3,000,000
Reserve Fund	£4,000,000
Reserve Liability of Stockholders	£3,000,000

HEAD OFFICE—LONDON
38, Bishopsgate, E.C.2.

West End Branch:
28, Charles II Street,
Haymarket, S.W.I.

Manchester Branch:
52, Mosley Street 2,
Liverpool Branch.
27, Derby House, Exchange Building.

BRANCHES:

INDIA	SINGAPORE COLONY	NORTH BORNEO	PHILIPPINE REPUBLIC
Amritsar	Changi	Jesselton	Cebu
Bombay	Seletar	Labuan (Agency)	Iloilo
Calcutta	Singapore	Sandakan	Manila
Cochin		SARAWAK	
Kozhikode	MALAYAN FEDERATION	Kuching	HONGKONG COLONY
Delhi	Alor Star	Miri	Hongkong
Kanpur	Butterworth	Sibu	
Madras	Ipoh	THE UNITARY REPUBLIC OF INDONESIA	CHINA
New Delhi	Klang	Djakarta	Shanghai
	Kuala Lumpur	Medan	Tientsin
PAKISTAN	Port Swettenham	Surabaia	
Chittagong	Penang	INDOCHINA	JAPAN
Karachi	Seremban	Haiphong	Kobe
	Sitiawan	Saigon	Osaka
CEYLON	Taiping	THAILAND	Tokyo
Colombo	Teluk Anson	Bangkok	Yokohama
		Bhuket	
BURMA			
Rangoon			

NEW YORK AGENCY: 65, Broadway, New York City, 6; N.Y. U.S.A.
HAMBURG AGENCY: Borsenbrucke 2A, Hamburg, 11.

FOREIGN EXCHANGE and General Banking Business transacted.

CURRENT ACCOUNTS opened and FIXED DEPOSITS received for One Year or shorter periods at rates which will be quoted on application.

SAVINGS ACCOUNTS also opened in Local Currency with interest allowed at rates obtainable on application.

The Bank's Head Office in London undertakes EXECUTOR AND TRUSTEE business, and claims recovery of British Income Tax overpaid, on terms which may be ascertained at any of the Branches.

A. J. BIRD,
Manager.

HONGKONG & SHANGHAI BANK
HONGKONG (TRUSTEE) LIMITED.

EXECUTORS
AND
TRUSTEES
FOR THE
COLONY
AND THE
FAR EAST

HONGKONG AND SHANGHAI BANK
HONGKONG (TRUSTEE) LIMITED
the Trust Corporation of the
HONGKONG AND SHANGHAI BANKING CORPORATION
HONGKONG

Travel and ship by

BUTTERFIELD & SWIRE
(Butterfield & Swire (Hongkong) Ltd.)

GRANT

George Falconer and Company (Hong Kong) Limited
ESTABLISHED 1855

NAVIGATIONAL, SURVEYING,
SCIENTIFIC INSTRUMENTS.
NAUTICAL PUBLICATIONS.
BRITISH ADMIRALTY CHART AGENTS.
AGENTS FOR U.S. HYDROGRAPHIC OFFICE.

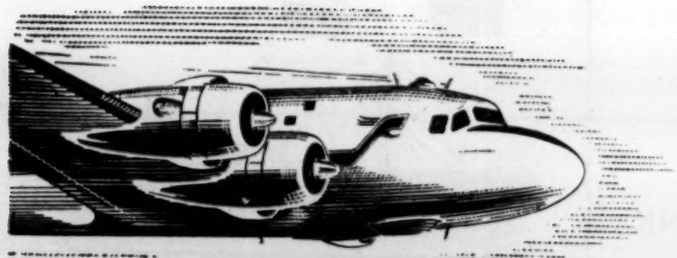
DIAMOND, PEARL AND PRECIOUS STONE MERCHANTS.
GOLDSMITHS SILVERSMITHS JEWELLERS.
Exporters of
RUBIES, SAPPHIRES, ZIRCONS, JADES, IVORIES AND CURIOS.
Wholesalers Retailers

&
REPAIR SERVICE

Union Building, Pedder Street.
Hong Kong.

Telegraphic Address:
Falconer, Hong Kong.
Tel. 22143.

Fly HIGH above the weather in a D.C.6



The four giant engines of the D.C.6 "Cloudmaster" mean *power* to take you to the calmest altitudes. Air-conditioning and radiant-heating in your extra-pressurized cabin provide the right atmosphere *all the time.*

S. A. S. offers the famous D. C. 6 service to Israel, Italy, Switzerland, Germany, Scandinavia, and North and South America, (close connections to all larger cities all over the world).

SCANDINAVIAN AIRLINES SYSTEM

Agents: THORESEN & CO., LTD. 2APB3

FAR EASTERN
ECONOMIC REVIEW

Vol. XII **Hongkong, January 10, 1952** **No. 2**

CONTENTS

	Page
ARTICLES	
Man-made Fibres	36
Indian Govt. Achievements since Independence	38
India's Glass Industry	39
Indian Bicycle Industry	40
India's Zamindari System	41
Ceylon Rubber Exports	41
U. S. Markets for Fats & Oils	41
National Income in Underdeveloped Countries	43
Mobilisation of Domestic Capital in F.E. Countries	44
River & Canal Transport Improvement in Far East	45
Japan's Alkali Industry	46
Japan's Textile Production	51
Radio Signals in Airline Operations	51
Tourist Service by BOAC	54
French Motorcar Industry	55
EDITORIALS	
Anglo-American Meeting	33
Formosa Question	34
Japan's Recognition of Taipeh or Peking	35
Britain's Stake in World Oil	35
TRADE, INDUSTRY, FINANCE	
Hongkong's Trade for November	55
Hongkong's Imports & Exports in Nov. and for first eleven months of 1951	56
Hongkong's Principal Imports & Exports (Oct. & Nov.)	60
Hongkong Manufactured Goods	60
Hongkong Trade with East Asia	61
Hongkong Factories' Progress	61
Hongkong Commodity Markets	62
Financial Reports (Singapore & Hongkong Share Markets)	63
P. & O. and B. I. Fleet	55

ANGLO-AMERICAN MEETING

Churchill's visit to North America is both a return to the methods of high policy he employed in wartime, and high policy in itself. It marks the return of Great Britain to a more active partnership in the Anglo-American responses to the needs of international leadership. It also means a reversion to progressive inter-Allied planning of strategy and policy. There has seldom been greater need, as there has seldom been greater lack, of this than during the two years since bipartisanship collapsed and Congressional agitators made foreign policy their stamping-ground, what time the British Labour Government limped along like a cripple.

It was at no time necessary for the British Prime Minister to make it plain to the Americans that he returned to them as friend and equal. Indeed, an effort was made by some publicists to represent the Truman Administration as extremely worried, if not actually quaking in its shoes, over the visit! If there were any truth in the sally, it lay in the notorious reluctance of American parties and politicians to expose their necks and fortunes in election year. And Mr. Churchill is no person to negotiate with by parties who have not made up their minds. Americans generally realise as well as others that many things have to be weighed in the scale of political values. The physical, industrial and financial power of the U.S. is spectacular. But Britain and her Commonwealth bring no small measure of these assets to the common pool, and many other things as well, such as richer experience and, by a strange reversal of roles, perhaps greater moral authority, especially in Asia, where old suspicions have been transferred. So Mr. Churchill did not go to Washington as a satellite stooge goes to the Kremlin. Britain is poorer than she was when the wartime intercourse between President and Premier began after Pearl Harbour. But she is nothing like so near the edge of the abyss as she was then and had been ever since Dunkirk. And if her economy is in as sorry a pickle as was her defence in those terrible years, at least she is tackling this with the same courage she faced the other a decade ago.

Mr. Churchill set the tone and temper of the conference as soon as he landed. Peace prospects for 1952 were, he said, solid. That was a good point of departure on which to build without panic, without undue haste, and without abandoning thought for the long morrow. Secondly, he made it clear, as he had done before, that he sought a good understanding over the whole field so that "we can work together easily and intimately at the different levels as we used to do," and to "make sure we help each other as much as possible, and in the best ways" in the common cause. No statesman realises more clearly the essential inter-dependence of the United States and Great Britain. He proclaims with equal firmness the need of agreed decisions in common. "We shall do our utmost," he had said in a broadcast earlier, "to preserve the British Commonwealth and Empire as an independent factor in world affairs." That is an objective going far beyond the necessities or arguments of the moment. It would still be a first article of policy, irrespective of any differences with America, by the very nature of the Commonwealth, which embraces both East and West, old nations and new—an embryonic world order on totally different bases from the despotic Communist model. Extravagant expectations from Mr. Churchill's visit are unwarranted in U.S. election year. Moreover, Mr. Churchill has just come out of the wilderness of opposition, with reasonable assurance of tenure of office for the crucial period

of the next three years, while the political prophets seem to think Mr. Truman is on his way out. Commitments are therefore likely to be limited. European, economic, and defence problems were from the first expected to have priority and Far Eastern issues to be secondary. But observers hoped that the conference might give a new slant to political and psychological attitudes. In recent years there has been too much concentration on the negatives of the cold war and too little attention to concrete solutions of world problems. For this Moscow has been largely responsible. There have been hundreds of expositions, asseverations and rebuttals but singularly few statesmanlike outlines of possible solutions. Stalin now says the cold war is over. He ought to know, for he started it. There will be many sceptics; but we do need to move out of this diplomatic desert.

A beginning has been made in Korea. Here, for the first time since the war, the Communists have actually traded and bargained along traditional lines. But it will be well to deal with one front at a time, and to get Korea out of the way before, say, moving on to Formosa. Indeed, a second front might well be sought in Austria, for it is necessary to keep East and West in balance in these matters.

THE QUESTION OF FORMOSA

The future of Formosa concerns first of all the Formosans but until a plebiscite has been held in that island, under proper UN supervision, the question must remain undecided. It is likely that the majority of the native people would vote in favor of independence—they have had enough of foreign control under the Japanese though the material advance under their rule has turned out very beneficial for the economy of Formosa; and they also have seen the bad rule and exploitation, from 1945 to 1950, under the Chinese from the mainland until only recently under pressure from abroad the government of Chiang Kai-shek has shown signs of moderation and progressiveness. Few Formosans may decide in favor of reunion with China though the communists should be expected to go all out for union not with China but with the Chinese communist party's state—as long as Peking is under CCP control the return of Formosa is a matter of greatest importance to the nation which was however not so when the capital of China was Nanking.

Whatever the wishes of the native people (who are largely descendants of the Fukien Chinese) the realities of today cannot be ignored; Formosa must for the time being remain firmly within the orbit of democratic nations and no compromise with Peking over this issue could be permitted. It would be a very serious setback for the US and its allied nations if Formosa was to be allowed to fall into the hands of the communists. Russia is already menacing the North Pacific from various Siberian, Manchurian and Chinese ports but if she was to gain control of the erstwhile 'unsinkable aircraftcarrier of Japan' the defence position of the US would have to be reconsidered in such a new light.

Japan is exposed to communist attack from abroad and as the US has assumed, for the time being, the role of defender the expansion of communist strongholds and bases in the Northern Pacific must by all means be prevented. Peking claims without fail at every possible occasion that 'Taiwan is China' and that 'China owns Taiwan' and leaders of the CCP do not tire in threatening the conquest of that island with the invincible army, navy and airforce of New Democratic China. At the same time these leaders are uttering threats after threats against Japan, that is to say against the Japanese unless they accept communism and institute the Moscow-prescribed reforms in their country. As was to be expected the Japanese feel, once again in their history, that their nation faces a serious period from across the narrow expanse of water separating them from the new imperialism. Rearmament of Japan would under these conditions appear a matter of national survival and the US can, and most probably will, lend the requisite assistance to enable Japan to defend itself against the new imperialism—the worst of its type as it aims at the subjugation of the mind and the 'scientific' control of thoughts of all the people.

The communist aggression waged in Korea, regrettable as it was, led to a world-wide clarification of the issue of this century, and among other things like rearmament in the democratic nations the question of Formosa was positively tackled. Before the North Korean armies, after receiving marching orders from Moscow, stormed into Seoul it appeared as if the days of Formosa were numbered. Hainan had fallen without much of a fight and pessimism was therefore rife in Taipeh and elsewhere among the supporters of the Nationalists and Chiang Kai-shek. The US was not prepared to finance the seemingly hopeless fight of the Nationalist armies and was resigned to the conquest of the island. However the wanton aggression of the communists in Korea which brought, according to a prearranged plan, the Chinese communist armies into the battle had the effect of activating Washington's Far Eastern policy and thus carrying with it the weak, undecided and frightened nations who had witnessed the success of the communists and thought of appeasing them.

Formosa was immediately 'neutralised' and the Peking regime was warned off by a formidable US fleet while the US started to defend Korea and to defeat aggression. The morale in Taipeh improved and before long the armies under Chiang showed signs of renewed vigor. The government transplanted to Taipeh from Nanking instituted reforms which inter alia led to general economic stabilisation. US aid started, slowly at first, but at present is expected to move into a higher gear. One spoke in Taipeh of invading the mainland and indeed a few actions at occupying beachheads were made; at the same time the internal opposition to the communists was organised and maintained from Formosa.

A new lease of life was granted the Nationalists with the outbreak of the war in Korea; but as the war dragged on and the overall aggressive designs of the communists in Asia were revealed, at the same time the US gaining ever more strength to meet the communist challenge, Taipeh secured an entirely new standing, with the US and internationally. The seat of the Chinese government remains in Taipeh where the Nationalists were compelled to flee following the military successes of the communist armies. Only a few governments have recognised Peking as the legitimate government of China and thus have withdrawn recognition from Taipeh (Nanking). The majority of nations still maintains relations with Taipeh. That Peking was recognised by a number of democratic nations was logical and correct according to precedents but it was strategically ill-advised. In this world which faces uncompromising hostility by the communists all considerations

affecting trade, arts and literature. science, even personal relations must be subordinated to the principle which guides our destiny; these are the hard facts of life of this and the growing generation.

Chiang Kai-shek was not so long ago treated with ill-concealed contempt— a general who had lost all his battles and had permitted or otherwise been unable to prevent the spread of graft and corruption. Today his prestige is recovering and he is now looked upon as an ally of considerable value. This he owes largely to the events following the Korean war but it has also to be acknowledged that the Nationalists did realise many of their internal and administrative reforms and that new political talent has shown up and is instilling new confidence in the Chinese. Taipeh may have a future—which depends on the development of international events this year and later.

Meanwhile Formosa remains a 'base' much to the chagrin of the Formosans who for all important considerations are deprived of a voice in the management of their own affairs. But this is a matter observed in many countries and territories, and what seems to be important is that the native population is well governed and kept economically satisfied. The eventual liberation of Formosa from outside control will have to wait until more vital issues have been settled.

The withdrawal of diplomatic recognition does not worry the Nationalist government as only a few nations have done so and they still maintain relations de facto. At the same time the recognition of Peking has not been a matter of any consequence; London has de jure relations with Peking but, as the British charge d'affaires in Peking has been described, they only amount to a 'post box.' India has taken a commonsense course by recognising the regime now in control of China as the government of that country but in no way prefers them to the Nationalists; to judge from the behavior of Delhi when it comes to deal with its own communists one may deduce that there is fear and aversion of Peking and all it stands for.

Formosa is the citadel of 'Free China' and must remain so until Peking can be made to adopt a more conciliatory and less aggressive course. Even if Peking changes its policy and creates conditions which may lead to its admission to membership of the UN, thus displacing the Nationalists, the question of Formosa is not settled. What agreements have been made many years ago and under conditions very much different from those prevailing today or likely to prevail in the near future do not apply now and must be revised. It would be contrary to the spirit of the UN and to the principles according to which that international organisation was established if Formosa was to be turned over to a Chinese government without the people having been given a chance to approve or oppose it. Today it is strategically necessary that Formosa remain as a base of the Nationalists but as soon as the political situation has undergone a change the right of the Formosans to self-determination must be upheld and the independence of the island, if so desired by a majority, be recognised.

Japan's Recognition of Taipeh or Peking

There is one Far Eastern issue on which Washington feels a sense of urgency. It arose from Japan's curious position vis-a-vis China. The question of Japanese recognition of the Chinese Nationalist regime in Formosa as the legitimate government of China appears pressing. Washington, and Mr. John Foster Dulles in particular, want Japan to sign a bilateral treaty with the Nationalists along a line similar to the peace treaty itself. It is, however, one thing to wipe the slate clean of the past—which is what a peace treaty is largely designed to do—and quite another to set a course for the future. There is much to be said for ending the formal state of war with the Nationalists, who were after all the major parties to the Sino-Japanese conflict all through. Nor would there be any lack of logic in offering to sign a similar quittance with the new regime. The threat that Washington may not ratify the Japanese Peace Treaty unless Japan and Taipeh come to some arrangement lacks force. It would make matters no better but a great deal worse if such a threat were in fact carried out.

In the days of disorder since the fall of the Dynasty in China, the foreign Powers kept official business going by recognising everybody who possessed effective power. Rival governments in Peking and Canton, rival groups in the warlords' wars, were all dealt with on de facto lines. There are still some who think Britain should have adhered to the habit when confronted with the new regime in Peking—all the more so since obedience to the condition Peking laid down (that intercourse with the Nationalists should be abandoned as a condition for recognition) produced such negative results. But we cannot begin to solve Far Eastern issues on the incorrect notion that Taipeh is the legitimate government of China. The ending of the war, and the founding of the shape of things to come, must surely be kept apart. Logical as it would be to wind up the war with the Nationalists as the universally recognised regime during wartime, it would be equally logical, and politically essential, to make it clear at the same time that recognition of the mainland government must await international decision, and is not prejudiced in any way by so signing off the war status between the two former enemies. Meanwhile it would be necessary for Japan, in her own interest, to secure reasonable freedom to pursue closer economic relations with the new regime in Peking. She cannot do so while a solution is still awaited in Korea but once a truce is signed there, relaxation of the present stringent restrictions should be permitted.

BRITAIN'S STAKE IN WORLD OIL

For the Seventh Henry Spurrier Memorial Lecture of the Institute of Transport, delivered in London on December 10, Mr. C. T. Brunner (Director and General Manager of Shell-Mex and B. P. Ltd.) chose as his theme "The Pattern of the Oil Industry," and had much of interest to say about Britain's stake in world oil. The position of Britain is unique in the world oil industry. Despite the fact that domestic production (45,000 tons a year) is negligible, and output in the Commonwealth (11.6 million tons or 2.1 per cent of the world total of 543 million tons in 1950) is so small, British and British-Dutch companies, comprising the "sterling groups," accounted, in 1950, for no less than 18.2 per cent of the total world production of oil (against 14.5 per cent in 1938), and for over 40 per cent of the commodity going into the world export and import trade. Oil is the most important single item in international trade, its value exceeding £1,000 million ($2,800 mil-

lion) a year. It would almost seem that, as Britain has gradually abandoned her former commanding position in the international coal trade, she has regained a substantial part of the lost ground by developing her stake in oil. There is, however, no direct connection between the coal and oil trends, although some of the larger British coal exporting firms have, of late, interested themselves in oil, particularly for ships' bunkers.

In spite of Britain's important share of the international trade in oil her domestic consumption is not all that large, amounting to only 17.8 million tons in 1950, or 3.3 per cent of the world total. This is due, in part, to the comparative abundance of indigenous coal, and of gas and electricity derived from it. The repercussions of the oil industry on the nation's economy are far-reaching. For example, in 1950 British firms manufactured oilfield, pipeline and refinery requirements to the value of some £70 million, of which about £50 million worth was exported. Turning from equipment for the production and refining of oil to that needed for moving it the British position is much more favourable. U.K. tankers now represent a gross tonnage of 4,239,000, or 21.5 per cent of the total British merchant navy; before the war they were only 17.5 per cent. Tankers represent 55 per cent of all the tonnage under construction in British shipbuilding yards, and 41 per cent of all tonnage being built throughout the world. Today they are by far the most important export branch of the British shipbuilding industry. The world oil industry's impact on Britain's economy are by no means confined to the engineering, chemical, shipping and shipbuilding activities. The prosperity of not a few branches of British industry is dependent on the demand for their products—vehicles, stores of all kinds, etc.—to assist the world activities of the British oil groups.

The rapid development of the Middle East oilfields, whose production increased from 16 million tons in 1938 to 88.5 million tons in 1950, has been accompanied by the expansion of refining capacity in Western Europe from 20 million tons in 1939 to 50 million tons in 1951, with an objective of over 60 million tons at the end of 1953. The United Kingdom has fully shared in this expansion, and British refinery capacity has risen from 3.5 million tons in 1939 to 20 million tons in 1951 with the goal of 26 million tons in 1953. The import of crude oil instead of finished products leads to economy in foreign exchange. A new petroleum-based chemical industry has, too, arisen to make use of certain of the refinery products. Moreover, there are solid advantages in locating chemical plants in the neighbourhood of the refineries, and close to their important markets.

These new and enlarged British refineries are creating special domestic distribution problems. In 1939 U.K. refineries provided less than 25 per cent of domestic consumption of oil products, the balance was almost wholly met by importing tanker cargoes of finished products. These refineries are replacing the old ocean storages as the main source of supplies. The basic pattern becomes one of moving supplies from refineries to the old ocean installations, and also to a number of new and comparatively small water-fed depots round the coast and on the principal waterways. The latter will serve as delivery centres for the area surrounding them, and as feeding centres for groups of sub-depots in their neighbourhood.

Although the oil industry is to such a very large extent a transport industry, it would be wrong to regard it economically as other than an integral part of the world's power industries, which together with coal and hydroelectric energy provide the power needed by mankind. Over the 12 years ending in 1950 the share of the world's power provided by oil rose from 26 to 36 per cent. In the United States oil outstripped coal as premier power contributor in 1948. In the U.K., which is still one of the chief coal producing areas in the world, the share of oil is, naturally, very much smaller; but it is expanding, having risen over the same 12 years from 7 to 11 per cent.

Looking some little way ahead, means will, no doubt, be found of harnessing the tides, utilizing solar energy and applying nuclear fission to power station processes, etc. In the meantime, however, with the difficulty of finding men to win coal, and the limitations imposed by nature on the generation of hydroelectricity, it follows that if the world's power supply is to expand, it will be necessary to look to the oil industry to provide the lion's share of the increase.

The standard of living is largely a function of the productivity per man-hour of the employed population, and it is closely related to the amount of power available per worker. There was a power availability in the United States, in 1950, of the equivalent of 7.6 long tons of coal per capita per year, converting all forms of power into their coal equivalent. The corresponding U.K. figure was 4.3 tons. If Britain were to raise both the standard of living and industrial productivity per man-hour reached in the United States in the middle of the century, over the next decade or two, it would be necessary to envisage an increase in the power availability in U.K. of from 4.3 tons per capita per annum to at least 6 or 6.5 tons, an increase of the order of 50 per cent. Unless new and revolutionary methods of exploitation are discovered it seems unlikely that it will be possible to provide for this increase by expanding coal consumption from just over 200 million to around 300 million tons a year. If the standard of living and of productivity is to be raised to the extent suggested it will, in the short term, be necessary to look largely to oil to bridge the gap. In other words, Britain's oil consumption trend will be upwards at least for several years to come.

MAN-MADE FIBRES

Progress of Synthetic Textiles Industry

The first hint of the possibility of man-made fibres is found in Micrographia published by Robert Hooke in 1664. Here the eminent English physicist pointed out that silk was a glutinous "excrement" which the silkworm forced through an orifice in its body. He went on to suggest that "some ingenious, inquisitive person" might succeed in producing a similar fibre artificially. Nearly two centuries later at a meeting of the British Association for the Advancement of Science Louis Schwabe exhibited a fabric woven from glass thread, obtained by drawing molten glass into filaments. Their future importance lay in the fact that the drawing was done through a spinneret—the first recorded use of such a device. Fibres so made have a high degree of uniformity in their dimensions, and they aroused the interest of Swan of electric lamp fame desperately seeking a suitable filament material for his invention. In 1883 he invented a process of squirting nitrocellulose solution through a die or spinneret into a coagulating bath of water and alcohol. It occurred to him that these filaments might also have possibilities as textile materials; so he made some very fine threads which were woven and publicly displayed at the Inventions Exhibition of 1885.

The essence of Swan's methods became, in due course, the basic principles of synthetic fibre production, and his success rekindled interest in cellulose as a starting material in the minds of others. In 1883 Cross, Beadle and Bevan discovered how to make viscose from celluose. Acetate rayon followed soon afterwards. Ere long thanks to the courage and enterprise of the Courtaulds and the work of the brothers Dreyfus at Spondon near Derby the great viscose and acetate rayon industries were built up first in Britain and then in nearly every part of the world. The recent spectacular growth of the rayon fibre industry is brought out by comparing it with that of the other three natural fibres:—

World Output of Textile Fibres
(in million lb.)

	1951-2 (estimate)	1950-51	1946-47	1934-39 (average)
Cotton	17,000	13.994	9,987	14,172
Wool	2,365	2,285	2,125	2,058
Rayon	3,675	3,503	1,691	699
Silk	38	33	29	121

Source: Commonwealth Economic Committee.

* * *

British acetate and nylon producers have plans for expanding production. A vast new works for British Celanese is to be built at Wrexham, North Wales. Rayon is not only attractive in price, but is also stable and likely to remain so. The British staple is among the cheapest of spinning raw materials in the world. It is one shilling or more cheaper than that produced elsewhere. U.K. deliveries of rayon yarn to consuming industry was 119 million lb. in 1939, just over 200 million lb. in 1950 and is now running at an annual rate of 222 million lb.

Recent years have seen great developments in the perfection of protein fibres. All manner of materials—milk, soya beans, maize, fish, chicken feathers and eggs—have been used as starting materials with varying degrees of success. Ardil derived from protein of the groundnut came into commercial production at Dumfries, Scotland in February 1951.

Truly synthetic fibres, of which nylon and Terylene are typical examples, form a smaller group with greater long-term possibilities. They have emerged from the chemical investigation of long-chain molecules. In 1928 Dr. W. H. Carothers of Du Pont Company in the United States set out to study such synthetic molecules, and in the course of his exhaustive work examined literally thousands of chemical fibre-forming combinations. From his labours came nylon, which in early 1939 was launched as a hosiery in America, and met with immediate and enthusiastic acceptance by the public. The first nylon yarn was spun in Britain in 1941. Five years later the U.K. production approached one million lb. and is now ten million lb. a year. Extensions to the Pontypool factory of British Nylon Spinners and to the I.C.I. plant at Billingham will take its output to nearly thirty million lb. by 1954.

It was from a careful study of the published work of Dr. Carothers that J. R. Whinfield, a chemist on the staff of the Calico Printers Association, deduced that condensation of ethylene glycol (well known anti-freeze agent) with an organic acid (terephthalic acid), both derived from petroleum gases, would be likely to give a fibre-forming substance free from the disadvantage previously associated with such products. With the able assistance of Dr. J. T. Dickson Whinfield produced the fibre-forming substance now known as Terylene in Britain (and Dacron in the United States). In the early part of the war Terylene was studied at the Government Chemical Research Laboratory at Teddington, but, later, I.C.I. acquired the world rights to the patents except for the U.S.A. where it is licensed to Du Pont Company. Development of the fibre was carried out by the Plastics Division of I.C.I. at its experimental station at Welwyn Garden City, and in a pilot plant at its factory at Hillhouse near Fleetwood. Both continuous filament yarn and staple fibre have been produced for market appraisal. On November 10, 1950, I.C.I. announced that it was constructing a large plant to make Terylene synthetic fibre with an annual capacity of 5,000 tons. Provision has been made for the rapid expansion of capacity.

The chemical industry has had its foot in the door of the textile market from the very outset as a supplier of dyes and processing materials. Rayon, then nylon, opened this door wide and the newer fibres Ardil, Dacron, etc., are stampeding through the opening. Soaring wool and high cotton prices have provided another welcome opening through which man-made fibres are penetrating with irresistible force. Apart from their intrinsic merits they provide the textile industry with fibres the supply of which is virtually unaffected by famines or droughts, diseases or boll weavils which influence the yield of natural fibres. Moreover, because of their uniform dimensions and predictable properties their use eliminates many of the difficult processes necessary in converting natural fibres into yarns. In addition they are available at relatively stable prices. Above all, they are crease resisting, unappetizing to moths, washable and hard wearing.

* * *

Introduction of new fibres and expansion of old ones—rayon, nylon, etc.—are creating new markets for virtually every basic chemical, sulphuric acid, caustic soda, coke, lime, natural gas, petroleum, salt and others. And a step beyond the production of newer fibre intermediates such as acrylonitrile, terephthalic acid and butadiene is being accelerated. Requirements of intermediates like ethylene glycol, vinyl chloride and adiponitrile are mounting in proportion to the sales of their fibre derivatives. The existence of plentiful supplies of raw materials is the corner stone of new fibre development. It is pregnant with significance that E. I. du Pont de Nemours and Co. Inc., the largest chemical company in the world, points to increase in its sales to textile industry as the most outstanding development in recent years. Twenty-eight per cent of its sales or about $360 million was attributed to products sold to the textile industry. The next largest outlet for its products was the automobile industry accounting for 9 per cent of aggregate sales. Du Pont's operating investment in synthetic fibres is $450 million with substantial funds earmarked for the expansion of Dacron and Orlon fibre production capacity.

Almost the only radical changes in the textile field since the dawn of the century had been the introduction of viscose, cuprammonium and acetate rayon as supplementary raw materials, and those sponsored by the chemical industry such as acid, acetate and basic dyes, special textile processing chemicals; shrink-, water and wrinkle-resisting aids and moth-proof processing. The introduction of wholly new fibres like nylon and, later, acrylics has had a profound impact on the staid and rigid textile industry based on natural fibres. The U.S. production of synthetic fibres, other than rayon, amounted to 145 million lb. against a total fibre consumption of approximately 7,000 million lb. in 1950. The history of increasing prices for natural products and decreasing prices, along with extended application, of synthetics appears likely to be repeated in the case of fibres. The remarkable growth in consumption of viscose and acetate rayon, coupled with improvement in quality of fabrics, durability, attributes of great versatility and low price, bears testimony to this trend. Last year the U.S. rayon consumption was 1,350 million lb. or 19.5 per cent of the consumption of all fibres. By the fall of 1952 the annual rate is expected to go up to 1,520 million lb. The output of truly synthetic fibres, i.e., nylon, polyacrylics, polyethylene, polyvinyl chloride, glass and protein fibres is reckoned to reach 500 million lb. by 1958, and around 1960

the textile market will have about 750 million (or even 1,000 million) lb. of synthetic yarn and staple fibre to absorb. Synthetic fibres captured just over 2 per cent of the U.S. textile market in 1950, and perhaps will win over 10 per cent of the market in 1960, and if rayon is included 35 per cent in that year.

* * *

In the near future the character of the textile market promises to undergo marked changes in two major respects, i.e. the importance of blends versus straight fabrics; and the competitive interplay of natural versus synthetic fibres on the one hand and among semi-synthetics (rayon) and the true synthetics on the other. The advent of synthetic fibres has enabled the textile industry to capitalise on its greatest asset, namely variety. The industry is eagerly exploiting man-made fibres in new constructions, new styles, new wearing qualities and, above all, in novel blends. Pleasant touch, crease resistance and other desirable properties are obtained with proper blending. This business of blending is becoming more of a science and less of a craft. By methodical selection and experimentation the textile technologist takes various fibre combinations and spins a yarn. The next step concerns dyeing, heat, effects, styling and construction. Addition of nylon to high style goods provides better strength, improved stability and fewer seconds. Orlon, Dynel and Dacron staple fibres are wool-like, and incorporate warmth, crease resistance and abrasion resistance to fabrics. While filament Orlon cannot be readily dyed by conventional methods undyed Orlon in an acetate cloth produces a third dimensional effect thus enhancing styling. Certain fibres have properties which recommend them for specific uses. The high resilience of Dacron and its resistance to wrinkling and rapid recovery in both wet and dry states suggest that an ideal light weight fabrics can be made for summer suiting. Orlon staple is characterised by its warm hand, bulking power (providing good insulating properties, high coverage and more yardage per lb.) and wrinkle resistance. Hence it is more promising in winter suitings and overcoats. Also blends of 15-25 per cent Orlon with wool provide effective shrinkage stabilisation. Nylon possesses good abrasion resistance, tensile strength and flex life, rendering it eminently suitable for women's dress, sports shirts, etc., but low modulus and low resilience rule out its use (unless blended) in men's suitings. This synthetic trinity have three things in common:—water insensitivity and so ease of cleaning and quick drying; ability to heat set and form creases and pleats in garments, and resistance to attack by moths, mildew and chemicals. Dynel is also claimed to offer greater economy in production. On the other hand, Orlon appears to have a slight edge in heat resistance and marked superiority in weather resistance. For mass textile market and in blends where slight shadings of quality would be lost Dynel has a definite advantage in its lower cost ($1.25 per lb. for the staple against $1.9 for Orlon staple).

Spun rayon has already captured about 50 per cent of summer weight garments field, including men's suiting, in the United States, and is making a determined bid in the carpeting field. It is now girdling for battle with wool in the latter's own ground, namely, autumn and winter weight suiting. Evidently spun rayon makers feel that their product can compete with wool on the basis of equal or better wear, shape retention, crease resistance, appearance and, most important, price. In this contest rayon and chemical companies are cooperating in furthering fibre commercialisation. An integration all the way from the control of chemical raw materials to distribution to textile mills is to be expected in the near future.

Prospects of the synthetic fibre industry depends on the quality and availability of the products to be marketed. Chemical fibres are in reality moulded plastics. The attributes of a fibre-forming polymer are high softening point; high tenacity over a reasonable temperature range; soluble or meltable so that it may be spun; high modulus and good textile qualities of hand, drape, creep, elasticity, dye affinity, etc. There are two methods of forming long-chain molecules: by addition (typical examples are polyvinyls) and condensation (nylon). The next step is spinning the fibre by one of three techniques — melt, dry or wet spinning. Melt spinning is used for nylon, Terylene, polyethylene and others. Dry spinning is practised with acetate rayon and Orlon filaments, and wet spinning is used for viscose rayon and Dynel staple. Final processing steps comprise drawing or stretching of the yarn to increase strength by molecular orientation along the axis of the filament; plying and weaving; scouring, dyeing and finishing the fabric into an infinite number of patterns, textures, styles and properties. In the United States Dacron (Terylene), the truly British synthetic fibre, is deemed to have so much quality appeal that it would be difficult to exaggerate the extent of its potential contribution to the suiting industry. There are those who think that it is as near an approach to the fibre of the future as man has yet devised.

REVIEW OF INDIAN GOVERNMENT ACHIEVEMENTS SINCE INDEPENDENCE

By G. M. Laud (Bombay)

Within less than three months from today an elected Government will be brought into being. The present one is essentially a care-taker government mainly composed of Congressmen, but supported by a few non-Congress intellectuals. It is, therefore, worth while to take stock of the achievements of the care-taker government since August 1947.

Before the dawn of independence the war had produced far-reaching repercussions. Between 1939 and 1945 the currency issue was expanded from Rs. 196 crores to Rs. 1,095 crores and the monetary expansion was accompanied by rising prices, the wholesale price index number advancing from an average of 95.7 in 1938 to 244.4 in 1945. Apart from generating inflation the war had resulted in haphazard expansion of industries without regard to efficiency and costs.

The partition of the country changed the political and economic face radically. Besides the loss of substantial sources of supply of raw material and food, the Indian Union inherited 77 per cent. of the area of undivided India to support 82 per cent. of the pre-partition population. In addition she was faced with the rehabilitation of over 30 lakhs of refugees and of feeding the addition to the population at an annual rate of 4 million. The expenditure on relief and rehabilitation up to the end of March 1951 has amounted to Rs. 108 crores and no less than 13 townships have been built up or are in the process of being built for refugees. About 22 lakhs of people have been settled on land while several thousands have been found employment in trade and industry.

Another important problem which government had to tackle related to external defence and internal security under unsettled conditions and as a result of the re-drawing of the Indian frontiers. Kashmir particularly has accounted for a high portion of the annual defence budget. These burdens, coupled with the need for rehabilitating the government enter-

prise, were responsible for a cumulative budgetary deficit of Rs. 118 crores during the four years of independence.

Viewed in this context the following table of the course of wholesale prices and living costs may be interesting:—

Year and Month	Food articles	Raw materials	Semi-manufactures	Manufactured articles	Miscellaneous	General Index	Cost of living, Bombay.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
November, 1947	294.8	377.9	252.5	283.2	460.8	302.0	273
December, 1948 (post-decontrol peak)	397.5	457.7	328.3	347.3	536.7	383.6	310
August, 1949 (pre-devaluation)	410.6	460.5	330.8	348.6	541.6	389.0	291
June, 1950 (pre-Korean War)	402.8	490.7	335.5	347.6	692.0	395.6	297
April, 1951 (post-Korean war peak)	412.5	683.1	387.9	411.7	751.5	457.5	319
November, 1951	401.9	583.8	377.9	400.2	750:9	435.6	—

It might be noted that whereas the general price level in India rose by 60 per cent. between 1946 and April 1951, the rise was as much as 75 per cent. in the U.S., 82 per cent. in Canada and 88 per cent. in the United Kingdom. In other words, although the absolute pressure of inflation was by far the greatest in India, both in the war and in the post-war period, the relative increase in the pressure of inflation in the post-war period was smaller in India than that in any other country in the world except Switzerland. This trend is much more pronounced during the past eight months and only goes to show that Government has succeeded in confining the spiral of inflation within reasonable limits in the face of extraordinary difficulties.

In assessing the future course of inflationary pressures two factors need to be taken into account. Inflation is a universal phenomenon and the policy of full employment does suggest that inflation has come to stay. The present Government of India appears to have reconciled to the view that we are on an inflationary bed and its task is only to see that the country is able to lie on it comfortably.

To achieve this modest objective it proposes to rely on maintaining the taxation rates at the present level in order to finance not only the current rate of revenue expenditure but also a portion of the capital budget. This will be supplemented by restraints on credit and spending. The rigidities built up during the past decade have rendered the monetary weapon rather blunt. Its use has been further limited by the fact that the bulk of the credit is not provided by the banking system and is, therefore, beyond the reach of the government arm. On the other hand, the end of the buying spree and the deficit in the balance of trade have been playing a more effective role. People are for the first time in ten years more conscious about the value of money rather than goods. Investment in real estate has shrunk appreciably and the demand for bullion has slumped heavily. Thus has been provided a favourable climate for the new government to pursue a vigorous disinflationary policy.

Despite the difficulty in securing adequate raw materials industrial production has made a better showing in 1951. The general index of industrial output with 1946 as the base rose from 98 in 1947 to about 110 in the following year, slipped back in the following two years and is currently running at a substantially higher level around 117. The improvement is mainly due to the substantial rise in the output of textiles which enjoy a high weightage in the index and engineering and miscellaneous goods. Unfortunately, agricultural production has not kept pace with the growing demand. This is partly because of the betrayal of the nature.

Of late, the State has come to occupy an important role in the industrial economy of this country. With the nationalisation of the railways, telephone companies and several electric supply undertakings, the total investment in the public sector now exceeds Rs. 1,000 crores against the liberal estimate of Rs. 2,000 crores in the private industrial corporate field. During the next five years the fresh outlay on government account will be of Rs. 1,500 crores while that on private account is not likely to exceed Rs. 500 crores. Thus Government will be occupying a dominant role in the industrial field.

The railways, which are the biggest nationalised enterprise, have a total mileage of 33,860 involving a capital investment of Rs. 806 crores. The increase in fares and freights coupled with the maximum use of equipment has enabled Government to ensure a handsome surplus for the past three years. The total number of river valley projects under construction is about 135 and the expenditure so far incurred is Rs. 144 crores.

The estimates of cost have, however, gone wrong. The Damodar Valley River Project originally estimated to cost Rs. 55 crores may now involve an outlay of Rs. 110 crores. The estimate for Bakhra-Nangal Project has been raised from the original level of Rs. 60 crores to Rs. 133 crores and only one-tenth of the work has so far been completed. The Hirakud Project should now cost Rs. 87 crores as against Rs. 48 crores visualised earlier and the scheme is only in the preliminary stage. The benefits from these projects are not likely to be as favourable from the financial angle as those from the old ones but the problem of food and agricultural raw materials will be considerably eased.

Amongst industrial undertakings governed by the State, the Sindri Fertiliser Factory planned to produce 350,000 tons ammonium sulphate annually has cost Rs. 23 crores. A hundred percent. increase in the expenditure can be traced to faulty estimates and the delay in acquiring land and lack of co-ordination. The railway collieries in which government has invested Rs. 6 crores are incurring a loss of Rs. 1 crore per year. The pre-fabricated housing factory costing the Central Government Rs. 75 lakhs is now in the process of being liquidated.

Road transport has been nationalised in most States but despite the increase in passenger fares the investment is not remunerative to Government. The telephone department has been, because of the monopoly, yielding a high return to Government but the service to the consumer is poor. Electricity undertakings and industrial schemes launched by the State Governments have produced unpleasant results and the Governments, both the Central and the State, are now engaged in searching measures which will make the State enterprise remunerative without fleecing the consumer. The reports submitted by a retired member of the Indian Civil Service and the foremost industrialist in the country are being scrutinised but the finalisation of the structure and management of state enterprise will be left to the elected government.

INDIA'S GLASS INDUSTRY

The early history of the glass industry in India is a long tale of failure and difficulties. The first attempt to produce glass on modern lines was made by M/s. Muree Brewery Ltd., who started a glass bottle factory at Jhelum in 1870. The services of a German expert were secured for the factory. This factory, however, soon closed down on account of the high cost of production. The first glass factory under Indian management was started at Titaghur under the name and

style of M/s. Pioneer Glass Works in 1890 with an Austrian expert and after a hard struggle of about ten years, it also had to close down owing to lack of technical men, the foreign expert having deserted the enterprise. A number of unsuccessful attempts were made after this failure. Some of the factories, however, struggled hard and have survived into the present time, notably at Allahabad, Ambala, Bahjoi and Talegaon.

A careful analysis of the failure reveals that these were due to—(a) the lack of efficient organisation; (b) foreign experts' ignorance of Indian conditions and the financiers' impatience for quick results; (c) the lack of technical skill on the part of Indians and consequent dependence upon foreign experts; and (d) the improper location of the factory. The industry did not suffer because of any lack of raw materials in the country, as sand, lime and refractories were available in India. Although the position regarding refractories is still not very satisfactory, India has made considerable progress in the manufacture of refractories.

A large number of Japanese experts were employed in the early days of the glass industry and these experts were more successful than the European experts. The present day glass industry is modelled on the Japanese lines, probably owing to its earlier association with Japanese experts. The pot furnaces in vogue in Japan are more suited to Indian conditions on account of the units being small and causing less initial expenditure. Moreover these are easier to work and require less machinery.

The first World War (1914-18) gave momentary impetus to the industry owing to the stoppage of imports from countries which were either allied to the enemy or occupied by him. Japan seized the opportunity to establish a very substantial market in India. New factories, however, were opened in India to meet the demands of the country. Lampware, bottles, jars and tumblers were produced during the period. With the termination of the hostilities, the indigenous production was completely stopped in many cases and the highest import of glassware in India was in the years immediately following the war. From 1930 onwards, there was a progressive reduction in imports. This might, to a large extent, have been due to the second Swadeshi movement of 1930. From 1930 onwards, the glass industry as a whole developed on fairly scientific lines and articles much better in quality were produced than at one time was thought possible. Some factories installed automatic and semi-automatic machines for the manufacture of sheet glass, bottles, etc. It was just before the last war that better furnaces were installed. Some firms changed over to tank furnaces for more production. The case of the glass industry was referred to the Tariff Board, which reported on it in 1932, suggesting certain measures of protection. One of the important recommendations was that a refund of duty on soda ash was to be allowed to the glass manufacturers. This resulted in a number of glass factories being established and by 1939 there were about 80 factories in the country producing glass and glassware. The total value of their production amounted to about Rs. 20,000,000 per annum. The import figures for glassware in 1939 were Rs. 12,000,000. It would, therefore, appear that India was self-sufficient to the extent of 60% of her glass requirements.

The present production capacity of glass is about 150,000 tons per annum and there are about 250 factories, of which about a hundred manufacture bangles. The production target reached the peak figure of about 120,000 tons, in 1944-45. Production, thereafter, has decreased considerably because of the difficulties experienced by the industry in different direction. The different items of glass that the Indian industry is capable of producing are:— (1) Bangles; (2) Tableware (mainly tumblers); (3) Lampware; (4) Bottleware; (5) Sheet Glass; (6) Scientific Glassware; (7) Neutral Glass; and (8) Glass shells for electric bulbs. In addition, a small quantity of pressed-ware is also being produced.

Of the principal raw materials required for the manufacture of glass, soda ash and borax are the only imported items, others being indigenously available. Large deposits of good quality sand are available in many parts of the country. Lime suitable for the manufacture of soda lime glass is also available. Soda ash is the third important ingredient. Its partial production indigenously has now been started. The paucity of soda ash was the chief cause of the decline in production during 1947-48 though, of late, this difficulty has been overcome. Borax, which is used for the manufacture of borosilicate glass, is mainly imported.

Refractories play an important role in the production of glass and special kinds of refractories are needed for the glass furnaces. Most of the glass producers now get their refractories from indigenous sources but the supply is not adequate. The construction of furnaces is also important in the making of glass. An improved furnace not only gives a better type of glass but also lowers the cost of production. Some of the Indian glass factories have now remodelled their furnaces on modern lines and new units which are coming up have also been asked to keep this in view.

The Indian glass industry is established partly on a cottage industry scale and partly on a large-scale basis. The present-day glass industry is highly technical and requires for its development sound knowledge of physics, chemistry and engineering, particularly in the field of furnace designing. Recently, a few scholars were sent abroad, for training in the glass industry and some of them have already returned after completing their studies.

INDIAN BICYCLE INDUSTRY

The cycle industry in India is a nascent industry and, therefore, it requires great care to bring it up. Until last year the firms manufacturing complete cycles were the Hind Cycles Limited, Bombay and the Hindustan Bicycles and Industrial Corporation. Since then T. I. Cycles of India, Madras, Sen Raleigh Industries, Calcutta and Atlas Cycles Industries (India) Limited, Sonepat have also been established in India for the manufacture of cycles. The cycle industry of India is of a dual character. There are some firms which do not hide their foreign origin and identity and have come to settle in India. Their unambiguity is welcome. In fact, India requires assistance of foreign friends either of capital or technical experience or both. Certain other firms claim to be national in the sense that the capital is Indian. As a matter of fact there is no cycle firm which can be truly called national. These pretenders are combines of foreign firms which in the beginning days of independence wanted to evade taxes.

In view of the new units coming into production it is hoped that India will have to depend less on foreign imports. There is no doubt that production of cycles and cycle parts has expanded during the past few years. In 1949 Indian manufacturers produced 64,425 cycles and cycle parts worth Rs. 1,796,053. During the next year production went up to 103,153 complete cycles and cycle parts worth Rs. 6,451,908. But in the current year production seems to have declined. Up to August 1951, 52,703 complete cycles were produced and the production of cycle parts up to July 1951 was valued at Rs. 5,910,410. Figures in value do not give the exact trend of production owing to the fact that prices have gone up considerably. But the production of complete cycles at 52,707 during eight months of the year does definitely indicate that production is falling.

As a result of manufacturing of cycles and parts in the country, imports have declined. Imports of complete cycles and cycle parts during the last three years were of the following order:

Year	Complete Cycles (Nos.)	Cycle Parts (Rs.)
1948-49	264,392	15,086,997
1949-50	268,148	15,918,684
1950-51	165,461	9,640,307

Production of cycles and cycle-parts has expanded considerably in India in the last few years. During the first 8 months of 1951, 52,707 complete cycles were produced. In 1949 Indian manufacturers produced 64,425 cycles and in 1950 103,153 cycles.

THE EVIL OF INDIA'S ZAMINDARI SYSTEM

There is hardly any need to stress the importance of the measures to abolish the zamindari system which is prevalent in almost all the constituent units of the Republic of India. Even from the economic point of view, leaving aside the human factor which is so vitally involved in this system, it has been recognised by all that the system must go. It is no longer required, as its function has already died. There is no doubt that most of the industrialists have fallen in line and are for eliminating the system. And yet the system is sustaining its life.

During the past four years or so Governments in the States have enacted legislation whose aim is to sound a death knell at the door of this system. This legislation is not uniform and therefore lack of co-ordination is seen not only in the manner in which the programme will be accomplished but even in payment of compensation, which has been provided for by every State Government. Every time the Government tried to enforce the programme opposition has whittled it down.

The zamindars, who are remnants of feudalism in India, have sought the help of law courts, which according to their decisions have made it difficult for the State Governments to proceed further. The Prime Minister of India while speaking at the occasion of Gandhi's birthday expressed himself that legal technicalities have thwarted the speed which the Governments were proceeding to abolish the zamindari system. It has been noticed that the law courts have given different decisions on this measure. The Allahabad High Court and the Patna High Court have differed on the interpretation of Clause 31 of the Constitution and thus their decisions were contradictory. The zamindars ultimately appealed to the Supreme Court on the ground that the present Parliament was not competent to amend the Constitution to effect abolition of zamindari system. However, this legal technicality has been resolved by the decision of the Supreme Court of India. Yet the zamindars have again moved their petition to the Supreme Court on other grounds. Thus, the vicious circle goes on and there is no effort made by the Governments both at the Centre and in the States to break it. The peasantry during the past four years has changed both in ideology and outlook, and to keep them bound with chains any longer is to court disaster for the whole country. The intention of the Governments which have framed legislation might be sincere. The zamindars, in order to protect their interest and status quo, will do all in their power so long as they can fight and for this, of course they cannot be blamed. It is human nature to possess greed, and, naturally, zamindars cannot be expected to prove exceptions. The blame lies with the legislators of the country who, without investigating thoroughly, pass laws in a hurry for which everyone has to repent later on. If the law was framed carefully there would be little chance for the zamindars to challenge it before the courts of law.

RUBBER EXPORTS FROM CEYLON

Ceylon is no longer shipping rubber to communist China. The one shipment of over 5,000 tons which was sent to China on board a Polish ship seems to have been the last. The Ceylon Govt has adopted a policy which is strongly against any compromise with communist nations. However due to pressure of commercial circles who were anxious to make a higher profit from exporting to Peking which paid a better price, the Govt at Colombo permitted the single shipment. Although much publicity was given to the export the Chinese Nationalists failed to intercept the ship and so the cargo arrived in China where it was transferred to the military for the purpose of aiding in the war in Korea. Certainly the Ceylon Govt must have had misgivings about the export of rubber knowing the ultimate destination of the raw material. Meanwhile the attitude of Colombo has stiffened and communist China will not obtain further supplies from Ceylon. There is a very vocal communist group in Colombo which urges, as is to be expected, the supply of China by Ceylon with all such raw materials as Peking requires.

A total quantity of 7,726 tons of rubber was exported from Ceylon in November 1951. The principal buyers were: United Kingdom — 3,148 tons; United States of America—1,384 tons; Holland—697 tons; France—597 tons; Germany—384 tons; Italy—360 tons; Mexico—260 tons; Canada—195 tons; Sweden—177 tons; and Belgium—145 tons.

Local consumption amounted to 18 tons. The total production for the month was 10,500 tons made up as follows:—Estates—8,000 tons and Smallholdings—2,500 tons.

UNITED STATES FOREIGN MARKETS FOR FATS AND OILS

By Paul E. Quintus (Washington)

The postwar shortage of fats and oils was one of the serious consequences of the wartime disruption of trade channels. Our allies as well as our enemies were desperately short of fats and oils. To help fill these needs, the United States greatly increased its fats and oils output and, for the first time, became a major exporter of these commodities. Production is now running about 12 billion pounds a year—nearly 50 percent above prewar.

With production and trade in fats, oils, and oil-seeds recovering progressively each year since the war in other parts of the world, the United States is faced with the problem of determining what the future holds for this war-borne industry.

It appears certain, in the light of the most recent crop reports, that a new high record of fats and oils production will be achieved in the United States for the fourth successive postwar year. This means that we will be seeking export outlets again in 1952 for large quantities of fats, oils, and oilseeds. Not only will the United States want to export oilseeds and their products—particularly soybeans and soybean oil, cottonseed oil, and to a lesser degree flaxseed and peanuts—but it will also want to market abroad large quantities of lard and inedible tallow and greases. Therefore, United States producers are highly interested in the output and demand for these commodities in other countries.

World Production

In the Western Hemisphere, Argentina is currently the United States only major competitor. The Argentine carryover of all oilseeds and oils—including flaxseed, sunflower seed, cottonseed, and peanuts—at the close of this year will be relatively small: Large export sales in 1950 sharply reduced accumulated stocks, and thus far this year large quantities have been exported, chiefly to Western Europe. Although the Argentine Government has made strong efforts to expand substantially the plantings of flaxseed, it is unlikely—largely because of severe drought—that the harvested acreage will be much greater than the 2 million acres harvested last season.

Exports of edible oils in 1952 will depend largely on the outcome of the sunflower seed, cotton, and peanut crops, not yet harvested. Exports of lard and tallow from Argentina, although second largest in the Hemisphere, are so small that they will offer United States exports little competition.

Brazil, of course, will continue as a major exporter of oils and oil-bearing materials. But Brazil's exports are generally not directly competitive with ours. They are mostly the kinds of oils we import—castor, oiticica, babassu, and tung. Brazil has, however, exported small quantities of soybeans, cottonseed oil, and peanuts and peanut oil, and soybean production may expand to a point where exports will become substantial.

In Canada, where production of flaxseed this year may be double last year's low level, there will be greater supplies for export, mostly as linseed oil.

Mexico will probably export some flaxseed again in 1952 as well as some shelled peanuts, and perhaps a fair tonnage of cottonseed.

In the Eastern Hemisphere, Africa's peanut crop is expected to be considerably better than last year's. This is true for both British and French West Africa. Thus, exports to the United Kingdom and France, primarily, and to other European countries, may be expected to be substantially greater in 1952 than in 1951. Furthermore, it would seem that exports of palm oil and palm kernels from Africa—chiefly Nigeria, the Belgian Congo, Angola, Sierra Leone, and French West Africa—are likely to be larger in 1952 than this year.

The large olive crop this year in the Mediterranean Basin countries will be a boon to Western Europe, which imports fully half of its fats and oils. Reports from Spain, Italy, and Greece—which together normally account for about two-thirds of the world's output of this oil—indicate that the olive crop will be double last year's small harvest.

Europe's major oilseed crop—rapeseed—has continued to expand in Sweden and may hold its own in France and Western Germany this year. However, acreage in the Netherlands has declined sharply from 1950. Animal fats—butter, lard, pork fat, and tallow—are of considerable significance in Western Europe's supply picture, and it is probable that combined production of these items in 1952 will be above prewar. On a per capita basis, however, domestic animal-fat supplies will still be lower than in prewar. Production this year of fish oil in Northern Europe, primarily Norway, has been unusually good, but one cannot foretell what the coming year will bring. However, the output of whale oil from the Antarctic pelagic whale catch—of special importance to West European countries—is not likely to change greatly in the 1951-52 season because the catch of baleen whales is limited under the International Whaling Agreement.

India was at one time the world's leading source of peanuts and castor beans and a major exporter of flaxseed. While that country—and Pakistan, which only 4 years ago was separated from India—still produces substantial tonnages of these oilseeds, exports have been sharply reduced by governmental controls to hold down domestic prices and to increase domestic consumption. It is unlikely that exports of edible oils and oilseeds from India will be any greater in 1952 than in 1951. In fact, for the foreseeable future, India cannot be expected to return to its former role of exporting large quantities to fat-deficit areas.

Ceylon's exports of copra and coconut oil in 1952 may be somewhat less than the tonnage exported in 1951. Exports again will probably be mainly to continental Europe, with smaller quantities to India. There have been no indications that Ceylon will renew its agreement to sell most of its surplus production to the United Kingdom.

The Philippines, source of roughly half of the oil equivalent of copra and coconut oil moving in international trade, may maintain in 1952 its present tempo of high production and export unless prices fall sharply below current levels, and unless weather conditions in the coming months are unfavorable.

Exports of copra and coconut and palm oil from Malaya and Indonesia in 1952 could be up some from 1951. However, developments in these two Far Eastern countries may be influenced by domestic considerations there: Increased home consumption is being encouraged and, in Indonesia, continued civil disturbances and labor unrest tend to hamper progress in rehabilitating palm plantations.

Finally we come to the Communist area of China and Manchuria. Exports of peanuts from China are beginning to show up in volume and are likely to continue to be of some significance in 1952. While exports of Chinese tung oil to the United States, and other dollar-trading countries, have been embargoed, supplies to non-dollar importing countries probably will continue to be available, but in reduced quantity and chiefly through Hongkong.

Manchurian soybeans, for the first time since the end of World War II, have been exported to Europe in substantial volume in the past 12 months. Assuming that Manchurian production of soybeans is expanding, now that the avenues to Manchuria's prewar outlets have been reopened, it seems probable that the export volume in 1952 will be considerably larger than in 1951.

It is more than coincidental that the United States soybean industry expanded rapidly during the period when Manchuria was out of the world market. From the standpoint of world trade, the United States has essentially replaced Manchuria as an exporter of soybeans and oil. The first movement of any consequence from Manchuria since the war began with the 1950 crop. Since about December 1950, a fairly steady stream of vessels loaded with soybeans has left the Manchurian port of Dairen en route to Europe. Most of the contracts on 1950 crop Manchurian soybeans entering Western Europe have been negotiated through Hungarian firms. Since there is no private action in Hungary on matters of this kind, it means that the Government negotiated the sales. Hungary apparently acquired the beans through a trade agreement and resold them to Western European countries paying the highest price or offering the currency most desired by the Communists.

The sales terms of the Hungarians for Manchurian beans are fair average quality, pure basis, with a maximum of 5 percent brokens, a minimum oil content of 17 percent on the beans as delivered with price discounts for oil content below 17 percent, and maximum moisture of 12 percent with price discounts for moisture over 12 percent. Buyers are not required to pay premiums for oil in excess of 17 percent or for less than 12 percent moisture. Payment is arranged after the ship is reported in Colombo or Aden. Sampling is at the European port of arrival and the analysis is made in European laboratories. Arbitration, if any, is in London according to the terms of the Incorporated Oil Seeds Association.

The analysis on two cargoes delivered to Antwerp was reported as follows:

	Cargo 1 Percent	Cargo 2 Percent
Oil content	18.3	18.8
Moisture	11.2	11.2

More recently it has been reported that the Manchurian soybeans are being sold by the Chinese National Import-Export Corporation in Tien-Tsin through its German agency in the Russian Sector of Berlin. It seems that the beans will be processed under contract by German mills for the account of the Chinese Corporation. Several cargoes were said to have been dispatched to fulfil a processing contract covering about 6 million bushels of soybeans, and as much as 18 million bushels may be involved.

Markets

Now that some of the production and surplus supply highlights around the world have been covered, the deficit aspects should be of interest, as should the possible foreign market outlets for surplus supplies of fats and oils, particularly as they affect the United States.

The principal importing areas of the world—as far as fats and oils are concerned—are those that are most highly industrialized. Although there are some important exceptions to this generalization, the major market outlets for surplus supplies are North America (including the Caribbean), Western Europe (including the United Kingdom), and, to a lesser degree, Japan.

Although the United States has forged to the front in recent years as a major exporter of fats, oils, and oilseeds—mostly edible—it is also a major importer of certain industrial fats and oils and olive oil. In general, they are items that normally are not produced here or are not readily interchangeable with United States products in surplus supply. In the order of their importance, the major source areas for United States imports of fats, oils, and oil-bearing material are the Philippines, South America, Africa, and southern Europe.

Copra and coconut oil—the major oil imported into the United States—certainly will be brought into this country in large volume again in 1952. Coconut oil is used chiefly by the soap industry, but it is important to the defense program also, as an ingredient in napalm fire bombs.

Palm oil, obtained chiefly from the Belgian Congo in recent years, is a preferred oil in the steel industry. Furthermore, it is a stockpile item. Imports in 1952 probably will approximate the volume brought into this country in the past 2 or 3 years.

From South America—principally Brazil—the United States imports castor beans and oil, babassu nuts and oil, and oiticica oil. Despite the fact that the United States has this year initiated a rather ambitious castor seed production program, it is likely that it will import from Brazil in 1952 as much castor beans and oil as possible. Demand for castor oil has expanded greatly under the defence program and is being stockpiled in fairly large quantity.

Imports of babassu kernels and oil, oiticica oil, and tucum kernels may depend largely on availabilities in Brazil. The United States traditionally has purchased from Brazil the major share of these exported oilseeds and oils.

Tung oil and tung nut imports in 1952 will consist almost entirely of surplus supplies available in Argentina, Brazil, and Paraguay. Now that supplies are no longer available from China—which has embargoed exports to this country—the United States will depend entirely on imports from South America to supplement the output from its own tung groves.

Olive oil imports in 1952 again may be substantial. With the large olive crop in prospect this year in the Mediterranean Basin countries, a possible substantial reduction in price in 1952 may invite considerable interest on the part of the United States importers.

Canada is likely to continue to import from the United States rather sizable tonnages of soybeans and soybean and cottonseed oils now that the Canadian margarine industry, only 2½ years old, is firmly established. It is likely, also, that Canadian imports of inedible tallow and greases from the United States in 1952 again will be sizable. Flaxseed imports into Canada may be out of the picture because of that country's expanded production.

The Caribbean is an important market for surplus supplies of United States fats and oils. Cuba is now the largest single outlet for lard and buys substantial quantities of our inedible tallow and greases. In addition the United States exports some soybean and peanut oils to Cuba.

United States exports of fats and oils to Central and South America are not, in general, very substantial. Furthermore, the tendency in South America is to exclude imports and try to develop home processing industries. The major single export outlet is Venezuela to which the United States sends some of its lard, under the terms of a trade agreement with that country, and some cottonseed oil.

The world's major export market for fats, oils, and oilseeds is Western Europe, and it is primarily there that the United States must look for an outlet for its surplus supplies. All the countries, except possibly Sweden, now rely on imports to a considerable degree. In general, Western Europe's greatest need is for edible soft oils—the oilseeds like soybeans and peanuts. Apart from olive oil, rapeseed, or colza, oil is the only oil produced from domestic supplies in significant quantity. However, in southern Europe, there is also some soybean, sesame, safflower, and sunflower seed.

In sizing up the West European market possibilities for United States fats and oils in 1952, it is apparent that certain limitations are likely to be encountered. First, there is the recovery in European livestock, which means more animal fats on the Continent. Second, there is the bumper olive crop coming up in Mediterranean Basin countries this year, which has a direct bearing on exports of soybeans and oil. Third, the supplies from European overseas possessions and territories are showing some increase in production, and the "mother countries" give preference to these areas. And, last, the ever-present European dollar problem will carry over and play an important part in determining export sales.

National Incomes in Underdeveloped Countries

Asia, with more than half of the world's population, produces only one tenth of the world's national income. This is one of the findings of a recent United Nations publication called "National Income and its Distribution in Under-Developed Countries." The figures which have been compiled by the United Nations Statistical Office are of particular interest to Asia. As most, if not all national income figures, they do not claim to be infallible. In many cases they are based on estimates that cannot be quite accurate; comparisons from country to country are not always easy; and the conversion of local currencies into a generally acceptable common unit, in this case the US dollar, has added an additional difficulty, since it was necessary to select a suitable conversion rate.

Despite these reservations, the figures given in the publication are a most interesting indication of the size and distribution of national incomes in various countries of the world.

In 1949, the year to which all figures pertain, the national income in Asian countries totalled $58,000 million or about dollars 50 per head of the population. This is the lowest per capita income of any of the world's continents. Figures for the other continents are: Africa 75, South America 170, Soviet Union 310, Europe 380, Oceania 560, and at the top of the list North America with an average national income of dollars 1,100 per head of the population.

In relation to the size of the populations, this is the picture: North America with less than 10% of the world's population accounts for nearly 45% of the world's national income; Asia, Africa and South America together, with over 65% of the world's population, produce just over 15% of the world's national income. Only 8 countries, with 16% of

the population of 57 countries (covering 63% of the world's population) had in 1949 incomes per head of the population in excess of dollars 600; 33 countries with 50% of the population had incomes below dollars 300; and 12 countries with 34% of the world's population had incomes below dollars 100.

In the view of the United Nations statisticians this inequality, between the Asian countries, though striking, does not bring out sufficiently the still greater differences in the standards of living. Of the Asian countries most are in the under-dollar 100 group, the exceptions being Japan, Syria and Turkey with a national income between dollars 100 and 200, and Israel with an income of between dollars 300 and 450. In the $100-$200 group are: Brazil, Bulgaria, Chile, Colombia, Egypt, Greece, Japan, Mexico, Peru, Southern Rhodesia, Spain, Surinam, Syria, Turkey and Yugoslavia. In the $600 to $900 group are Australia, Canada, Denmark, New Zealand, Sweden, Switzerland and the United Kingdom. Per capita incomes run from $200 to $300 in Austria, Cuba, Hungary, Italy, Puerto Rico, and the Union of South Africa; from $300 to $450 in Argentina, Czechoslovakia, Finland, Germany (western), Ireland, Israel, Poland, USSR and Uruguay; and from $450 to $600 in Belgium, France, Iceland, Luxembourg, the Netherland, Norway and Venezuela.

The Report also contains revealing statistics about foreign investments, and incomes and claims arising from them. In most countries, the balance of payments made abroad for interest, dividend and branch profits were not large, and in a great majority under 1 to 2 percent. There were only four exceptions where foreign financial commitments exceeded 5%. These countries were: Northern Rhodesia, Venezuela, Iran and the Dominican Republic.

The special reason for these rather large outgoing balances were in the case of Northern Rhodesia (27%) the British-owned copper mines; in Venezuela (17%) the large United States investments in Venezuelan oil; in Iran (13%) British investments in oil; and in the Dominican Republic (6%) United States sugar companies accounted for the entire balance.

The United States is by far the most important recipient of investment income from abroad. Though US direct investments abroad, that is investments effectively controlled by US nationals, amount to only just over one third of the total value of US foreign investments of all types, income received from these direct investments constituted almost 80% of the total income received from all investments. Although US assets in both Europe and Canada exceeded those in Latin American countries, they represented nearly half the total US income from all overseas investments. In 1948 U.S. receipts amounted to $971.8 million dollars.

Britain's foreign indebtedness now exceeds the value of her overseas holdings, but British overseas investments are still far larger than the investments of any nation except the United States. The bulk of these investments are in Australia, Canada, the Union of South Africa, British Central Africa, New Zealand, India, the United States, Brazil and Argentina. Several of these countries have since the war become net creditors of Britain. India, for instance, once one of Britain's heaviest debtors, is now a large creditor, and parts of British Africa have also ceased to be debtors. Altogether, the foreign investment position of most of the British dominions and colonies has improved considerably as compared with pre-war years.

The rate in the liquidation of British overseas assets was, however, more rapid than the fall in investment income. While nominal capital value declined between 1938 and 1948 by 45% investment income fell only by 25%. The reason for this discrepancy is to be found in the systematic liquidation of the less profitable investments, and by the higher prices and profits of the postwar years. Britain's income from overseas investments in 1948 totalled £116 million.

POPULATION INCOME AND PER CAPITA OF CONTINENTAL DIVISIONS, 1949

	Population	Continental Income			Per Capita income in terms of US$		
Continent	Number (thousand)	Percentage of world total	Amount $US billion	Percentage of world total	All countries	57 selected countries	Other areas
Africa	197,881	8.3	14.0	2.6	75	140	60
America North	213,316	9.0	237.0	43.6	1,100	1,200	70
America South	107,519	4.5	18.0	3.5	170	175	90
Asia	1,253,514	53.0	58.0	10.5	50	70	30
Europe	392,789	16.6	148.5	27.3	380	400	240
USSR	193,000	8.1	59.5	11.0	310	310	—
Oceania	12,434	0.5	7.0	1.5	560	710	50
World	2,370,453	100.0	542.0	100.0	230	350	50

PERCENTAGE DISTRIBUTION OF NATIONAL INCOME BY MAJOR BRANCHES OF INDUSTRY

	National income in currency of country		Percentage of Income originating in Construct.						
Country	Currency Unit	Amount (Million)	Agriculture	Mining	Manufacturing	transport & communic.	Commerce	Dwellings	Others
China (1946)	yuan	23,438	62.7	0.4	7.2	3.8	13.5	3.6	8.8
India (1948/49)	rupee	87,300	47.5	0.7	16.5	2.6	16.8	5.2	10.7
Japan (1949)	yen	2,743,018	28.4	2.2	27.1	11.1	16.0	0.9	14.3
Phi'ippines (1948)	peso	4,069	62.2	1.0	3.5	4.9	14.6	—	13.8
Thailand (1948)	baht	16,967	61.3	0.6	12.8	—	—	25.3	—

Mobilisation of Domestic Capital in Far Eastern Countries

What are the practical measures the countries in the Far East can take to support out of their own domestic resources and in an increasing measure their vital economic development programmes? And how can this be done without adding still more fuel to the already existing and still mounting inflationary pressure?

All the F.E. countries have to find an answer to the pressing problem of how to combat inflation without at the same time endangering their current development programmes. If inflation is an excess of spending power over the volume of available goods, then development programmes might be considered as helping the inflation by immediately creating spending power through the flow of wages and purchase of goods for projects, such as dams, the productive value of which is of a long-term nature. The development programmes of the Asian countries should however not be curtailed, though it might be advisable to establish priorities.

Inflation will continue; there are two types of inflationary factors: external causes (international situation, world-wide rearmament, stockpiling, rise of world prices) and internal causes that can be fought by domestic measures. Among the internal causes are government budgets, especially those showing deficits, because in these possible sources of state revenue have not been tapped and excessive spending power not mopped up. Taxation is high in many cases, but taxes are sometimes not evenly distributed and tax-administration, especially tax collection, not up-to-date. Therefore an increase in taxes might be considered to do justice to recent shifts in

incomes and in any case government expenditures should be kept under continuous review.

The promotion and sales of government bonds is necessary, but the masses of the people are not familiar with this type of investment. Past efforts to popularize government bonds have not been too successful. In Malaya, for instance, the public in a patriotic impulse during the war bought up government bonds, but was much less responsive in the post-war years. In other countries the sale of government bonds is closely linked with the question of the general political situation and establishment of a sound administration that would inspire confidence. Despite all these difficulties, however, the increased issue of government bonds sales should be undertaken, provided new techniques were employed and effective promotional campaigns could induce the public to buy the bonds.

The last few years with rising commodity prices and general scarcity of goods have brought about a shift in the distribution of incomes among the Asian peoples. The traditional savers, the middle classes, have been hard hit by the inflation. This applies particularly to the fixed-salaried higher officials and other better paid wage-earners in countries such as India, Pakistan and others. On the other hand an increased share of money has gone to the business community and to the agricultural classes and to some wage earners during and after the war.

The shift in incomes to the agricultural classes and primary producers generally requires new thinking and new techniques in the mobilization of surplus money for productive purposes. The rural areas occupy a special position in this respect, for it is there where saving and banking facilities are poor or non-existent, whereas they are fairly well or even highly developed in urban areas.

The co-operative movement is the best institution to operate in rural areas. But to exercise their function as a mobilizing force for savings, the co-operatives will need reorganization and enlargement of functions and facilities. The movement, though sound in core, has not been an unqualified success. Most of the co-operatives have moved in the direction of credit-giving rather than savings-mobilizing institutions.

An interesting and too often overlooked problem of human relations is the post saving office. The collection of savings through post offices has been grafted on to postal functions and the attitude of the post authorities was not always helpful. Post officials would tend to consider this work as an additional and unwanted burden. Instead of realizing the importance of savings and being "promotional-minded", they would be bureaucratic. This behaviour was all the more regrettable as in most countries the rural population had still to be educated to take their savings to the post offices. The building up of commercial banking facilities in rural areas is necessary.

River & Canal Transport Improvement in Far East

When inland waterways experts from Burma, India, Pakistan, Thailand and Viet-Nam recently returned to their countries from a three-month round-the-world trip, they concluded the first global inspection of rivers and canals ever undertaken with a view to finding out what could be learnt from experiences abroad to improve transport methods employed on rivers and canals in Asia.

Of all the things which they saw in their fields of interest in Europe and America, three impressed them particularly. These were the greatly increased use of welding in ship construction to replace the less economical rivetting; the application of a device called Kort nozzle around the screws of ships, giving them a much greater efficiency at low speeds; and the use of light alloys in ship building.

The trip, which began last August in Bangkok, is likely to produce practical results in the modernization of river and canal transport in East Asia. The trip of the experts is also bound to have one important result: it has produced a nucleus of qualified staff that will guide inland water transport developments in Asian countries on modern principals as best adapted to local conditions.

Preparatory work done by the United Nations Economic Commission for Asia and the Far East had shown that there were great possibilities in Asia for the development of inland water transport. It was also found that the problems in the various Asian countries were similar. Constructive suggestion might therefore be formulated more easily through regional co-operation.

Among the recommendations made by the experts are the following:—

(1) Diesel engines should in most cases replace steam engines; (2) Possible employment of shallow draft self-propelled craft with screws running in tunnels should be investigated; (3) Application of Kort nozzles seems advisable; (4) Push and pull towing should be given a further try especially in Burma, Pakistan and India; (5) Increased use should be made of light alloys for shallow drafted dumb craft; (6) A modest start should be made with mechanization of cargo handling operations; (7) Water conservancy work should be the responsibility of governments rather than of private companies.

The experts also considered the question of how their findings could be applied in the various countries. In this respect the situation is as follows:—

Burma:—The Burmese members of the group felt that judging from their observations there is definitely much scope for improvement on the Irrawaddy river. By judicious dredging, the draft of the river could be raised to 1.8 m. but expenses would be rather prohibitive.

India:—The Indian experts were interested in a modern tug generally suited to shallow depth of about 1 to 1.2 m which might be needed e.g. for the top-priority development project on the Ganga river and the Cogra river. They observed such a tug under construction at the S.C.A.R. shipyard in Strasbourg and particulars were also obtained at the Rupelmonde Shipyard (Belgium) of a second tug of this type. Use of aluminium alloys was recommended, as e.g. observed in a "Thames" type barge in England. It is urged that a demonstration project on the use of shallow draft tugs for towing country boats, as first proposed by Mr. Otto Popper, should also include use of steel or light alloy barges with a view to replacing country boats in due course.

Pakistan:—The Pakistani experts held that wooden country craft, carrying about 70% of inland water traffic, would continue to play an important role in the country's economy for years, but a start should be made with a modernization as soon as possible. Hydrographic surveys of various rivers of East Pakistan should be made to determine channel conditions that will govern decisions on the design of craft and selection of towing methods. The experts from Pakistan also recommended that the Government should take a hand in the dredging and reclamation programme, and that it should examine a programme for training of technicians, especially in the senior groups. Such training schemes should be prepared without delay, and if facilities are not available in the country, arrangements should be made for training abroad. The Government should also encourage greater activities of private inland waterway transport companies and give them all possible assistance in modernizing their fleet.

Thailand:—Construction of dams that would maintain the level of the Chao Phya river was recommended by the Thai experts. At present, navigability on the Chao Phya is re-

duced during the dry season from 400 to 130 km. Construction of the Chainat Dam, now underway, may be considered as a first step in this direction. Construction of wooden vessels should continue in view of high steel prices and abundance of wood in Thailand. This applies particularly to dumb craft. For self-propelled vessels especially passenger vessels, use of steel might be advantageous. The present method of astern towing should be maintained because in employing other methods such as push—or abreast towing serious damage to the wooden hulls of dumb vessels could not be avoided. For passenger traffic more fixed loading and unloading points are needed along the river.

Viet-Nam.—The Vietnamese experts suggested that smaller vessels should be used to explore the improvement of navigable waterways. Methods should be employed that were suitable for prevailing conditions in the country. The surveys should be made during daytime and the vessels with their teams could return to a nearby safe outpost for the night. For taking of soundings, echo-sounding equipment should be installed on a motor launch, and for dredging small propelled suction dredgers could be used, with the engine coupled to the pump or the propeller by means of clutches. The experts also recommended that one or two schools be set up to undertake the training of personnel.

THE JAPANESE ALKALI INDUSTRY

The alkali industry, which produces soda ash, caustic soda and various chlorine products from salt as raw material, is one of those basic industries which are absolutely essential to any industrial nation. In Japan, however, the development of this industry has been delayed on account of the unfavorable factors mentioned below.

First of all, Japan entirely lacks deposits of rock salt, which are found in Europe and America. There are also in Japan very few lands suited for making bay salt. In consequence of this deficiency, all salt for industrial use must be brought in ocean-going vessels from either the Red Sea and the Mediterranean Sea areas or the China coast.

Secondly, Japan experienced at the beginning great difficulty in obtaining equipment and technical knowhow essential for the industrialization of soda manufacturing. Under the circumstances, a great deal of time and effort had to be expended in the domestic development and perfection of the ammonia-soda process, more commonly known as the Solvay process. (In 1909 Japan approached the Solvay Company of Belgium, the head of the Solvay Combine, for a licence or transfer of blue-prints for the construction in Japan of a member plant and its joint management, but the Solvay Company rejected the Japanese proposal on the ground that there was no future prospect for this industry in Japan in view of the lack of salt resources in Japan and especially the existence of the Salt Monopoly Law).

Thirdly, owing to the domination of the domestic market for a long period by foreign soda companies, especially Brunner Mond & Co., Ltd., of England, belonging to the Solvay Combine, under the conditions described above, there was very little opportunity for newly developing this industry domestically.

Of the three factors cited above, the lack of self-sufficiency in salt resources, has been and is still a very unfavorable factor, which probably has hardly any parallel in the industrial countries of the world. However, these disadvantages were gradually overcome by the measures described below, with the result that by about 1940 Japan became one of the leading alkali manufacturing countries of the world.

History of Development

Le Blanc Soda Process.—As was the case with the history of the development of the alkali industry in the other countries, the Japanese alkali industry originally began with the Le Blanc process. It was in 1872 that the first alkali factory in Japan was built as an adjunct to the government-operated sulphuric acid factory of the Government's Mint Bureau in Osaka. Although this factory was closed down soon thereafter because of unprofitability of operations, a new Le Blanc-process factory established in 1881 by the Government's Printing Bureau in Tokyo finally succeeded in commencing actual production, though on a small scale. This was the beginning of the industrial production of soda in Japan.

Both of these government-operated alkali factories were transferred to private hands several years thereafter. In addition, two or three more alkali factories were constructed by private companies and by 1890 several alkali companies using the Le Blanc process were in operation. However, since their facilities were very inferior to those of western countries and since their products were unable to compete with cheap imported products as well as with domestic products manufactured by the Solvay and electrolytic processes, all of them went out of business by about 1917. This fate of Japanese alkali factories using the Le Blanc process was similar to that of the factories of other countries using the same process, except that there was a time lag of 40 to 50 years in the case of the Japanese factories.

Ammonia-Soda Process.—This process for the manufacture of soda ash was invented after the Le Blanc soda process and began to be widely used in Europe by about 1870, about which time the first Le Blanc-process factory in Japan was constructed. Owing to the unfavorable factors for the domestic production of soda, however, Japan continued for a long time thereafter to depend on foreign sources for the greater part of its soda ash requirements.

With the stoppage of soda imports from Britain, the principal supplier then, consequent upon the outbreak of World War I, the Asahi Glass Co., Ltd., the largest consumer of soda ash in Japan, took this opportunity to build at Makiyama, Fukuoka Prefecture, its own soda manufacturing plant with a daily capacity of 10 metric tons by the ammonia-soda process. This was in 1916, but actual operations were not begun until the following year. Then in 1918 the Nippon Soda Industry Co., Ltd. (presently known as the Tokuyama Soda Co., Ltd., but different from the present Nippon Soda Co., Ltd.) built a similar factory at Tokuyama, Yamaguchi Prefecture, for the purpose of manufacturing soda for sale to others, instead of for its own consumption. Thus two factories using the ammonia-soda process came into existence in Japan during World War I.

However, since their scale of production was not large enough to fill the entire domestic requirements, a considerable amount of soda products continued to be imported from abroad, chiefly from the U.S.A.

But with the termination of the war, imports of soda products from abroad began to increase sharply and Japan became the scene of stiff competition between Brunner Mond & Co., Ltd., and Magadi Co., Ltd., both of England, in soda ash and between the Allied Chemical & Dye Co., Ltd. (entered the Japanese market during the war) and Brunner Mond & Co., Ltd. in caustic soda. The result was that the domestic soda ash manufacturing industry was immediately confronted with the imminent danger of collapse, which, however, was prevented by raising to some extent the tariff duties after 1921 and by granting government subsidies for some time after

1929 in view of the need from a national standpoint of fostering the development of the alkali industry.

It was not until 1931 that this industry got out of difficulties and was favored with a grand opportunity to effect a spectacular development. This opportunity presented itself in the following ways:

With the outbreak in September 1931 of the Manchurian Incident, Japan enforced an export embargo on gold (for the second time) and the resulting depreciation of yen exchange had the following effects on Japan's foreign trade: (1) The rise in the prices of imported goods rendered the prices of domestic goods comparatively cheap, thereby reducing the volume of imports on the one hand and expanding the market for domestic goods on the other; (2) the brisk activity of Japanese export industries stimulated by the lower export prices of Japanese goods in terms of foreign currencies caused an increase in the consumption of soda by the glass, rayon and other manufacturing industries, thereby increasing the domestic demand for soda products; (3) the expansion of the Japanese merchant marine resulted in a reduction in the freight on imported salt, especially by using for its transportation Japanese vessels returning from Europe after unloading Manchurian soybeans there. In these ways, the disadvantageous conditions mentioned at the outset of this article were greatly mitigated.

Under such circumstances, the two soda companies in existence then were able to realise satisfactory earnings and to improve and expand their facilities year by year. By about 1934 they were able to operate at 93% of capacity. After 1935 five factories using the ammonia-soda process were constructed respectively by Toyo Soda Industry Co., Ltd. (Yamaguchi Prefecture), Kyushu Soda Co., Ltd. (Fukuoka Prefecture), Ube Soda Industry Co., Ltd. (Yamaguchi Prefecture), Kawanami Industry Co., Ltd. (Saga Prefecture) and Dai Nippon Artificial Fertilizer Co., Ltd. (Yamaguchi Prefecture), which last company is now known as Nissan Chemical Industry Co., Ltd. As a result, a total of seven factories using the ammonia-soda process were in operation by 1937.

These factories were, moreover, able to maintain in 1938 or thereabout an average operating rate of over 80% of capacity, producing in that year an aggregate of 660,000 metric tons of total ash, a record high up to that time.

Despite this advancement whereby the Japanese alkali industry succeeded in securing a market and in attaining the world's technical level, there still remained the weakness of being entirely dependent on foreign sources for the supply of raw material (salt). When it became difficult to obtain salt from the Mediterranean basin on account of the war situation in Europe after 1936, Japan turned to China for the supply of crude salt. But the supply from the latter source became increasingly difficult following the expansion of the Sino-Japanese conflict and especially after the outbreak of the Pacific War in 1941, owing to the heavy loss of bottoms. The result was that factories using the ammonia-soda process involving a large scale production were confronted with serious operational difficulties.

To cope with the situation, the three factories operated by Kawanami Industry Co., Ltd., Kyushu Soda Co., Ltd. and Dai Nippon Artificial Fertilizer Co, Ltd. respectively, either converted their equipment to the production of some other products or entirely suspended their operations. The remaining four factories also converted part of their equipment to the production of alumina and magnesium chloride to meet the urgent wartime demand for these products. As the allotment of crude salt for civil requirements was reduced to less than one-half, they were obliged to lower their operating rate until it was only 10% by the time of the termination of war.

In the immediate postwar period alkali production by the ammonia-soda process was limited to three companies, namely, Asahi Glass Co., Ltd., Tokuyama Soda Co., Ltd. and Ube Soda Industry Co., Ltd., in view of the inadequate import of crude salt, the designation of factories as reparations factories (the Tokyo Soda Industry Co., Ltd.'s factory was designated as such and suspended operations from December 1946 onward), and the decrease in the demand for alkali products. Between 1948 and 1949 it was planned to suspend the operation of another factory among the three factories in operation until then in order to effect rationalization of the industry through concentrated production. However, with the subsequent favorable turn in the importation of crude salt and the general industrial recovery of Japan, the projected suspension was abandoned and by 1950 the industry had recovered to the extent of even resuming, with SCAP permission, the operation of the factory of Toyo Soda Industry Co., Ltd. Especially in the recent period, the industry is witnessing such brisk activity to meet the production requirements of the Korean war that an increase in the import of crude salt is being strongly urged. It must be pointed out, however, that great efforts are needed to replace superannuated equipment resulting from neglected care during the past 10 years.

Electrolytic-Soda Process.—A study of the history of the development of the alkali industry of the world shows that the industrial production of soda by the electrolytic process began to develop from about 1890, that is, about 20 years after the inception of the ammonia-soda process. In Japan both of these processes were adopted almost simultaneously during World War I, in view of the great difficulties experienced in obtaining the supply of soda from abroad. In the light of the difficulty experienced in mastering the technique of the ammonia-soda process, it may be said that as a whole the electrolytic-soda process was perfected earlier than the former process.

To be more specific, the production of soda by the electrolytic process was first begun in 1915 when the Hodogaya Soda Industry Co., Ltd. constructed in Kanagawa Prefecture a factory using the diaphragm process. This was followed in the same year by the construction in Fukuoka Prefecture of a factory using the mercury process by the Osaka Soda Co., Ltd. Within only two or three years thereafter, that is, during World War I, some 16 companies with a total monthly capacity of about 1,000 metric tons commenced production by the electrolytic-soda process. Favored by a brisk demand for soda products against their short supply owing to import difficulties, all of these companies were able to realize substantial profits immediately after commencement of operations.

With the termination of war, however, they suffered a severe blow from the business conditions already described under the ammonia-soda process, with the result that only ten of them were able to continue operations thereafter. Since the production of chlorine products (by-products) especially was so large as to greatly exceed the domestic demand, a voluntary production curtailment (average of 50%) was enforced in order to avoid cut-throat competition among the producers.

As in the case of the companies using the ammonia-soda process, those using the electrolytic-soda process witnessed a favorable turn in their business operations after 1932, stimulated by the same factors. However, a significant change affecting the electrolytic-soda process alone was the achievement of a technical solution for the treatment of chlorine. Whereas up to that time the use of chlorine was limited to bleaching powder, its uses were expanded further by the perfection of technique for the manufacture of synthetic hydrochloric acid and liquid chlorine, as a result of which the technical limitations obstructing the development of the electrolytic-soda process were gradually removed. By 1937 the previous trend toward an excess supply of chlorine had been reversed to a shortage of chlorine, as had been the case abroad where this process had been adopted much earlier.

Under these favorable conditions, the operating rate of Japanese alkali manufacturing companies using this process steadily rose after 1930 to 70 to 80% of capacity. Expansion of existing factories, rehabilitation of closed-down factories and construction of new factories were undertaken one after another, with the result that by the peak years, 1938-39, the factories numbered more than 30. In addition, a number of soda factories were constructed in Formosa, Korea and Manchuria with Japanese capital. The output of caustic soda in 1939 was 145,000 metric tons, a record high up to that time.

But with the expansion of the Sino-Japanese conflict thereafter, the operating rate of factories using the electrolytic-soda process was steadily lowered as in the case of factories using the ammonia-soda process, owing to the short supply of crude salt and the curtailment of soda shipments to non-urgent, non-essential industries. After the outbreak of the Pacific War in 1941, a considerable number of the factories were liquidated, though, generally speaking, factories using the electrolytic-soda process were preferentially treated over those using the ammonia-soda process because of the more efficient use of crude salt by the former process and also the production therefrom of chlorine products essential for war purposes. In any case, at the time of the termination of war the operating rate of factories using either of these two processes had fallen to about 10% of capacity.

The postwar situation of the factories using the electrolytic-soda process has been the same as that of factories using the ammonia-soda process. At the present time 20 factories (including two incomplete factories) remain designated for reparations and the outcome of such designation is looked upon with serious concern as having an important bearing upon related industries. Since all of these factories, despite their designated status, are at present continuing operations under permission from SCAP, no direct inconvenience is felt in meeting the domestic demand.

Current Conditions of the Industry

Distribution of Factories.—Generally speaking, the alkali industry requires four to eight metric tons of raw material and fuel for every ton of finished product. Especially in the case of the ammonia-soda process which involves mass production, 600 to 800 metric tons of raw material and fuel must be transported daily to keep a factory working even at its lowest operating rate with the existing equipment. The weight of the finished products also is quite heavy and thus require mass transportation. Under these conditions, it is particularly essential in the case of the alkali industry that the factories be located near both the raw material sources and the product consuming centers. (In this respect, the British alkali industry enjoys the locational advantage of being concentrated in Lancashire and Cheshire). For the reasons that in our country crude salt must be transported a long distance from abroad and that water-ways are used to a great extent in transporting both raw materials and finished products, practically all of the soda factories in Japan are located on the sea-coasts. Especially the four factories using the ammonia-soda process are concentrated in Fukuoka Prefecture (northern part of Kyushu) and Yamaguchi Prefecture (western-most prefecture of Honshu) because these two areas (1) lie near the coal fields (in Japan the coal fields are located in Hokkaido, Kyushu, Joban in Ibaraki Prefecture and Ube in Yamaguchi Prefecture), (2) stand nearest to the foreign sources of crude salt and (3) possess large deposits of limestone. On the other hand, factories using the electrolytic-soda process are distributed widely throughout the country from Hokkaido in the north to Kyushu in the south in consideration of the fact that construction of factories in the interior, though advantageous from the standpoint of proximity to hydro-electric power resources, would be disadvantageous in all other respects, including the difficulty of transporting the by-products (chlorine products) to cities, which are mostly located on the sea-coasts.

Productive Capacity.—The recent changes in the productive capacities of Japanese soda factories using either the ammonia-soda process or the electrolytic-soda process are shown in Table 1.

TABLE I

CHANGES IN JAPAN'S SODA MANUFACTURING CAPACITY

1930-1950

(Volume in metric tons)

Year	Ammonia-soda process				Electrolytic-soda process	
	No. of factories	Total ash	Soda ash	Caustic soda	No. of factories	Caustic soda
1930	2	84,600	64,800	7,200	10	24,932
1931	2	131,400	108,000	18,000	11	36,953
1932	2	183,600	126,000	28,800	11	40,298
1933	2	270,000	198,000	108,000	13	51,364
1934	2	360,000	270,000	144,000	16	71,303
1935	4	475,200	270,000	191,520	21	95,571
1936	6	568,800	367,200	267,120	24	141,308
1937	7	716,400	399,600	339,120	24	179,712
1938	7	813,600	457,200	396,520	25	204,966
1939	7	928,800	457,200	414,520	30	216,988
1940	7	928,800	486,000	414,520	30	222,608
1941	4	835,200	403,200	403,200	32	234,958
1942	4	835,200	403,200	403,200	33	234,424
1943	4	835,200	403,200	403,200	35	237,079
1944	4	835,200	403,200	403,200	35	234,468
1945	4	835,200	403,200	403,200	36	253,290
1946	4	835,200	403,200	403,200	36	253,290
1947	4	835,200	403,200	403,200	36	253,290
1948	4	835,200	403,200	403,200	36	253,290
1949	4	835,200	403,200	403,200	36	253,290
1950	4	835,200	403,200	403,200	36	253,290

Sources: Data submitted to the Strike Mission for figures up to 1945; data collected by the Japan Soda Industry Assn. for figures since 1945 for the electrolytic-soda process factories.

The aggregate capacity of factories using the ammonia-soda process varies according to the increase or decrease in the number of such factories in view of the fact that technically the capacity of each factory is fixed at the time of drawing up the blue-print and no subsequent change is possible. For this reason the aggregate capacity of the four companies using this process has remained constant at 835,000 metric tons (calculated in terms of total ash) since 1941.

On the other hand, the capacity of factories using the electrolytic-soda process can be expanded from their original capacity by increasing the number of electrolytic cells, as the occasion demands. For this reason their total capacity could be and was steadily increased year after year until the termination of the last war in order to meet the increased demand for caustic soda and especially chlorides. Another factor responsible for this increase in capacity was the stiff competition in this category because of the imperfect voluntary control in this line of business, with the result that the expansion of capacity tended to constantly exceed the actual demand.

If the theoretical capacity of these two types of soda factories is revised by taking due account of the obsolescence and lack of standardization in their equipment, etc., their present operable capacity is reduced to figures shown in Tables II and III.

According to Table II, the total operable daily capacity of the factories using the ammonia-soda process is 1,415 metric tons, being about 60% of the theoretical capacity of 2,320 metric tons, which fact is clearly indicative of the substantial deterioration of their equipment due to over-work during the war-time and neglected repair in the postwar period.

In the case of the factories using the electrolytic-soda process, the present total operable annual capacity is 176,000 metric tons against their theoretical capacity of 253,000 metric tons. Since this is about 70% of the theoretical capacity, it may be said that their present condition is slightly better than that of the factories using the ammonia-soda process. It appears from this that the care and repair of these factories

TABLE II

AN OUTLINE OF JAPANESE COMPANIES MANUFACTURING SODA BY THE AMMONIA-SODA PROCESS

Name	Date established	Capital stock (Y1 million)	Name of soda factory	Daily operable capacity (metric tons)	Output in June 1951 (metric tons)	Share price per Y50 share (June 1951 average)	Latest dividend rate	Main products other than ammonia-soda
							%	
Asahi Glass Co., Ltd.	1907	Y500	Makiyama	550	14,203 (33.9%)	Y246	48	Sheet glass
Tokuyama Soda Co., Ltd.	1918	100	Tokuyama	300	9,123 (21.7%)	79	30	Cement
Toyo Soda Industry Co., Ltd.	1935	120	Tomita	315	9,213 (22.0%)	88	30	Electorlytic-soda and chlorides
Ube Soda Industry Co., Ltd.	1936	125	Ube	250*	9,405 (22.4%)	78	30	
Total		845	4 factories	1,415	42,124 (100.0%)			

*The actual operable capacity is believed to be 300 metric tons.

Sources: The Tokyo Securities Exchange for the share quotations and dividend rates; The Chemical Bureau, Ministry of International Trade & Industry for operable capacity and actual output.

TABLE III

AN OUTLINE OF JAPANESE MANUFACTURERS OF SODA BY THE ELECTROLYTIC-SODA PROCESS

Name	Date established	Capital stock (Y1 million)	Name of soda factory	Annual operable capacity metric tons)	Share price per Y50 share (June 1951 average)	Latest dividend rate	Main products other than caustic soda and chlorides
						%	
Ajinomoto Co. Inc	1925	Y500	Kawasaki	7,200	Y127	25	Glutamic acid soda and soybean products
Asahi Kasei Co., Ltd.	1931	700	Nobeoka	5,837	139	40	Rayon and explosives
Asahi Denka Co., Ltd.	1917	200	Ohisa	12,707	89	30	Oils and fats
Hodogaya Chemical Industry Co., Ltd.	1916	121	Koriyama Hodogaya	5,521	50	deferred	Dyestuffs and pharmaceuticals
Kureha Chemical Industry Co., Ltd. .	1944	100	Nishiki	8,573	59	15	Superphosphate of lime
Mitsui Chemical Industry Co., Ltd. ..	1941	800	Miike	7,211	43	deferred	Dyestuffs, pharmaceuticals and coke
Nippon Chemical Industries, Ltd.	1934	250	Yodogawa Kurosaki	4,195	88	,,	Coke and ammonium sulphate
Nippon Soda Ltd.	1920	580	Nihongi Takaoka	22,010	56	15	Ethylene glycol and zinc
Nissin Chemical Industries, Ltd. ..	1925	1,000	Okayama Niihama	1,849	60	15	Ammonium sulphate, dyestuffs and aluminum
Nissan Chemical Industry Co., Ltd. ..	1921	500	Oji Toyama	7,989	58	15	Superphosphate of lime and ammonium sulphate
Osaka Soda Co., Ltd.	1915	75	Amagasaki Kokura	16,537	*	**	
Showa Denko Co., Ltd.	1939	550	Yokohama Hirota	5,205	51	20	Ammonium sulphate, calcium cyanamide and aluminum
Tekkosha Ltd.	1928	360	Sakata	3,648	77	30	Steel alloys and calcium cyanamide
Toa Gosei Chemical Industry Co., Ltd.	1933	300	Fushiki Nagoya	22,022	80	30	Ammonium sulphate
Toyo Soda Industry Co , Ltd	1935	120	Sakaide Tomita	4,742	88	30	Soda ash (see Table II)
Total for 24 companies (including others not listed here)			36 factories	176,078			

*Not listed on the stock exchanges. **Unknown.

Sources: The Tokyo Securities Exchange for share quotations and dividend rates; The Chemical Bureau, Ministry of International Trade & Industry for operable capacity.

during and after the war were better than that of the latter group. However, as already pointed out, if the present designation of 20 of these factories as reparations factories is not revoked, an important change in their status will result.

Procurement of Raw Materials.—Crude salt used as raw material is, as already stated, imported wholly from abroad. In the prewar period, it was imported sometimes from nearby areas, chiefly China, and at other times from remote Mediterranean Sea and Red Sea, depending upon the changes in the international situation. At the present time salt is imported from remote areas, including the U.S.A. and Mexico, because of the suspension of trade with Communist China. Since under such circumstances the cost of imported salt cannot but be relatively high because of the high freight charges, there is a strong demand for the resumption of trade with Communist China and the expansion of Japanese bottoms with a view to reducing the freight charges.

Incidentally, the sale of salt in Japan is under government monopoly and in the postwar period a special price lower than the import cost was quoted for salt released to industrial users. That is to say, whereas the highest cif price of salt in the postwar period was $20 per metric ton (the lowest was about $8 in 1950), the delivery price to soda factories was quoted uniformly at the official price of Y3,000 ($8.33). The differential loss was covered partly by the higher price charged for table salt and partly by appropriation from the budget.

However, this system has been changed after April 1951 and the official price has been raised to Y8,000 ($22.22) per metric ton. Since, as a result, there is now very little difference between this delivery price and the actual import cost of salt, some of the soda manufacturers prefer the adoption of the prewar system of importing industrial salt on their own account. Although the return to this prewar system presents some problem with respect to inventory financing, it is believed that this system is likely to be adopted sooner or later.

With respect to coal for fuel, its domestic supply, other than heavy coking coal for steel manufacturing, is sufficient to cover present requirements (the present annual output is 45

million metric tons). The cost of coal (about $15 per metric ton for factory delivery), however, is considerably higher than in the U.S.A. Under the circumstances, Japanese soda manufacturers have a disadvantage, as compared with foreign manufacturers, in the boiling down of liquid caustic soda necessary in both the ammonia process and the electrolytic process.

With respect to electricity, Japan should have an abundant cheap supply of this energy in view of the favorable geographical conditions for the generation of hydro-electric power. However, owing to the concentrated demand for electricity in the postwar period because of the high cost of coal as fuel and also to the great delay in developing electric power resources during and after the war, there is now such a great shortage of electric power that it is one of the most critical problems of Japanese industries. Under the circumstances, the acquisition of an adequate supply of electric power is a prerequisite for the operation of factories using the electrolytic-soda process. In any case, however, the raise in electric rate has been so relatively small under the inflation that even with the approximately 30% raise effected in August 1951 the cost of electricity is still lower than that of other sources of energy.

Demand and Supply of Products.—The changes in the demand and supply of soda ash and caustic soda are shown in Tables IV and V, respectively.

TABLE IV

DEMAND AND SUPPLY OF SODA ASH IN JAPAN, 1930-50

(Volume in metric tons)

Year	Output	Export	Import			Net domestic consumption
			Soda ash	Natural soda	Total	
1930	57,233	0	36,593	28,613	65,206	122,439
1931	77,805	0	18,690	35,642	54,332	132,137
1932	84,204	0	25,918	20,507	46,425	130,629
1933	110,239	0	21,707	24,737	46,444	156,683
1934	132,852	15,401	16,486	20,653	37,139	154,592
1935	197,327	30,521	27,208	21,056	38,264	205,070
1936	244,500	27,400	17,858	22,959	40,817	257,917
1937	245,227	12,292	29,980	17,281	47,267	280,202
1938	250,670	5,052	19,411	2,009	21,450	267,068
1939	253,995	1,487	19,228	0	19,228	271,736
1940	230,944	1,162	16,957	0	16,957	246,739
1941	177,681	948	9,868	0	9,868	186,601
1942	140,149	89	4,909	0	4,909	144,969
1943	145,039	474	2,874	0	2,874	147,439
1944	100,599	263	0	0	0	100,336
1945	46,826	0	0	0	0	46,826
1946	22,350	0	0	0	0	22,350
1947	38,083	0	0	0	0	38,083
1948	75,111	0	0	0	0	75,111
1949	123,806	0	0	0	0	123,807
1950	166,907	3,446*	0	10,000	10,000	173,461

*Includes special procurement export.

Source: Survey by the Japan Soda Industry Assn.

TABLE V

DEMAND AND SUPPLY OF CAUSTIC SODA IN JAPAN, 1930-50

(Volume in metric tons)

Year	Output			Export	Import	Net domestic consumption
	Electrolytic process	Ammonia process	Total			
1930	26,539	8,199	34,738	18	37,589	72,309
1931	30,992	17,544	48,536	11	41,596	90,121
1932	37,301	37,815	75,116	2,511	28,193	100,798
1933	47,444	63,509	110,953	5,116	12,447	118,284
1934	64,519	113,252	177,771	12,282	9,928	175,417
1935	92,015	141,273	233,288	17,497	19,936	235,727
1936	116,132	168,867	284,999	23,430	11,597	273,166
1937	131,155	221,876	353,031	5,514	27,429	374,946
1938	145,487	301,671	447.158	11,615	266	435,809
1939	172,060	284,939	456,999	24,279	0	432,720
1940	140,906	265,603	406,509	13,135	0	393,374
1941	129,569	204,379	333,948	7,681	0	326,267
1942	112,568	115,027	227,595	3,390	0	224,205
1943	114,976	110,740	225,716	7,606	0	218,110
1944	100,372	56,774	157,146	470	0	156,676
1945	42,247	14,577	56,824	24	0	56,800
1946	21,514	7,784	29,298	0	0	29,298
1947	35,846	7,306	43,152	0	0	43,152
1948	59,668	48,380	108,048	15,000	0	93,048
1949	90,190	60,130	150,320	0	0	149,879
1950	123,124	77,583	200,707	367*	0	200,341

* Includes special procurement export.

Source: Survey by the Japan Soda Industry Assn.

Without duplicating here what has been stated already under the section on the history of development, it may be briefly said that whereas until 1930 one-half of the domestic demand for alkali products was covered by imports, the latter steadily declined thereafter according as the domestic production increased, with the result that it was possible to undertake even exportation.

A noteworthy increase in the domestic demand for soda products took place after 1935 in line with the general development of Japanese industries, particularly the glass industry requiring soda ash and the chemical fiber (rayon and staple fiber) industries requiring caustic soda. During the wartime, however, the munitions industries, especially the light metal industry, replaced the above two industries as the chief consumer of soda products, as may be seen from Tables VI and VII.

TABLE VI

JAPAN'S CONSUMPTION OF SODA ASH IN PERCENTAGES BY USES SELECTED FISCAL YEARS 1941-50

Use	% 1941	% 1942	% 1943	% 1944	% 1945	% 1948	% 1949	% 1950
Light metals	5.8	7.5	11.0	33.3	26.3	2.0	1.0	0.1
Pulp and paper	1.3	0.6	0.4	0.1	0.2	0.5	1.1	1.0
Seasonings	4.7	3.2	8.0	4.1	7.7	10.1	12.7	19.6
Glass	33.4	30.2	20.6	10.2	11.8	33.2	34.7	38.5
Chemicals	28.0	20.8	18.6	13.5	19.0	32.9	37 0	29.6
Textiles	2.4	1.0	0.7	0.2	0.3	2.8	3.2	2.8
Export	0.2	0.2	0.2	0	0	0	0.1	2.1
Munitions	8.0	22.2	28.4	21.0	14.0	0	0	0
Others	16.2	14.3	12.1	17.6	20.7	18.5	10.2	6.3
Total 100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Japanese Soda Industry Assn.

TABLE VII

JAPAN'S CONSUMPTION OF CAUSTIC SODA IN PERCENTAGES BY USES SELECTED FISCAL YEARS 1941-50

Use	% 1941	% 1942	% 1943	% 1944	% 1945	% 1948	% 1949	% 1950
Light metals	8.9	11.3	23.7	23.0	7.8	5.0	2.6	1.3
Pulp and paper	7.0	4.5	3.6	1.6	3.3	5.4	10.2	14.2
Seasonings	1.8	2.7	0.8	0.5	1.9	1.8	3.1	1.9
Chemicals	16.5	14 2	15.3	16.4	13.4	21.4	25.1	22.7
Textiles*	45.7	36.7	24.1	13.6	18.5	31.6	49.1	53.4
Export	1.6	2.1	2.9	0.6	0	14.8	0.1	0.2
Munitions	6.3	17.7	22.4	31.2	22.7	0	0	0
Others	12.2	10.8	7.2	13.1	33.3	20.0	9.8	6.3
Total 100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

*Most chemical fiber textiles.

Source: Japan Soda Industry Assn.

With the postwar recovery of the glass and chemical fiber industries as peacetime industries, the consumption of soda products is steadily returning to the prewar pattern. Against the estimated annual volumes of 264,000 metric tons of soda ash and 356,000 metric tons of caustic soda desired by the related industries, the Economic Stabilization Board has estimated their effective demand in the current fiscal year at 220,000 metric tons for the former and 300,000 metric tons for the latter. On the basis of this estimated effective demand, the various companies have drawn up their production schedules accordingly. Since there are hardly any impeding factors, with the possible exception of limited availability of electric power for allocation to this industry, production is being carried out according to schedule.

There is, however, a possibility that, depending upon the outcome of the Korean war and the future development of the international situation, production may not work out according to existing schedule, especially with respect to caustic soda, as there are now indications that the chemical fiber industry, a large consumer of caustic soda, will enforce 20 to 30% curtailment of operation in view of the recent slump in textile exports and the consequent drop in the prices of textiles.

Prices of Products.—As stated hereinbefore, the price of salt abroad is very low. In England and the United States where salt factories are built above the strata of rock salt, the cost of producing salt is limited to the cost of pumping up brine from the underground.

In Japan, on the other hand, the price of salt is very high because it must be transported by ships from remote areas. This fact necessarily makes the cost of Japanese soda products relatively high. Such being the case, under normal conditions foreign products are comparatively cheap and thereby tend to oppress the domestic alkali industry.

Since the import of foreign soda products, with the taxation of some Magadi ash, has been checked in the postwar period by foreign trade control, the question of competition with foreign products has been dodged so far. However, now that the postwar subsidy on soda products has been abolished (since October 1950) and the official price system also has been abolished (since April 1951), the relatively high prices of Japanese soda products may again become an important problem to the related industries.

From Table VIII it will be seen that the current domestic price of soda ash is $95-$100 per metric ton and that of caustic soda (95% solid) $185-$190. Though these prices are not so high when compared with the international prices prevailing in the Far East where the supply-demand relationship has become stringent since the outbreak of the Korean war, they are substantially high when compared with the internal prices in England and the U.S.A. Hence there is a need for rationalization of the Japanese alkali industry.

TABLE VIII

CURRENT PRICES OF SODA PRODUCTS IN JAPAN

(As of close of July 1951)

Item	Unit	Prices	
		Tokyo	Osaka
Caustic soda (95% solid)	metric ton	¥65,000	¥70,000
Caustic soda (liquid)	" "	59,000	60,000
Soda ash	" "	34,000	35,000
Bleaching powder (ordinary)	" "	18,000	15,000
Liquid chlorine	" "	46,000	45,000
Hydrochloric acid	27 kg. bottle	360	350
Bicarbonate of soda (ordinary)	50 kg. bag	2,950	2,900

It is true that in some quarters the view is held that the internal prices that have soared since the Korean war will decline if the chemical fiber industry curtails its operations. This may be so because the market for soda products, especially for caustic soda, is easily influenced by the movement of the chemical fiber industry, which is the largest consumer of soda products in Japan. Reports have it that the electrolytic-soda process factories are inclined, in emulation of the chemical fiber factories, to enforce curtailment of operations, as was done in the prewar period. The realization of such curtailment, however, is not easily possible in view of the provisions of the Anti-Monopoly Law and the Trade Association Law.

JAPAN'S TEXTILE PRODUCTION

Unit: Cloth 1,000 sq. yds.; Yarn 1,000 lbs.

	Sept. 1951	Oct. 1951
Pure cotton yarn	61,935	52,779
Cotton waste yarn	2,568	3,115
Cotton mixed yarn	3	0
Cotton cloth		
Independent weavers	106,904	108,[illegible]1
Spinner weavers	82,845	69,214
Other weavers	1,738	2,146
Number of spindles		
Installed	5,866,294	6,064,058
Operable	5,664,130	5,971,422
Operating		
Month-end	4,855,915	5,100,277
Average	4,994,829	4,246,659

	Sept. 1951	Oct. 1951
Number of Looms		
Installed		
Independent weavers	216,910	217,660
Spinner weavers	214,659	215,392
Total	380,756	282,682
Operable		
Independent weavers	214,659	215,392
Spinner weavers	63,846	65,022
Total	278,137	279,824
Operating		
Independent weavers	164,566	167,725
Spinner weavers	57,790	58,725
Total	222,356	226,450

	Sept. 1951	Oct. 1951
Number of operatives		
Independent weavers	95,671	96,630
Spinner weavers	63,846	65,022
Cotton spinners	94,960	97,538
Filament rayon yarn	11,861	12,144
Rayon staple	16,842	17,882
Spun rayon yarn	12,281	12,223
Spun rayon cloth	28,143	27,682
Filament rayon cloth	39,640	39,501
Filament synthetic cloth	138	235
Spun synthetic cloth	184	220
Filament silk cloth	9,873	10,243
Spun silk cloth	683	523
Silk mixed cloth	2,752	3,977

RADIO SIGNALS IN AIRLINE OPERATIONS

50TH ANNIVERSARY OF ATLANTIC "CROSSING"

Fifty years ago the first radio signal was sent across the Atlantic Ocean. From a primitive transmitting station in Cornwall, England, a signal—the three morse dots of the letter S—was heard in a receiving station in Newfoundland by Marconi and his assistants. Whether or not on that occasion he realised the developments that were to follow is not known, but the progress of 50 years is certainly as remarkable as Marconi's original trans-Atlantic signal itself.

Particularly in the world of aviation has radio become vital. Modern aircraft keep in touch with the ground on their flights to all corners of the earth with a certainty and reliability that nowadays is taken for granted. What is believed to be the first use of radio for airline operation was on the Hounslow to Paris service which commenced in 1919. The radio was Marconi's AD.1 and later AD.2, and was operated by the pilot in his open cockpit. This same equipment was later fitted to the DH.34's which flew originally from London to Amsterdam. When the equipment was serviceable, which was about seven or eight trips out of ten, ranges of up to 200 miles could be obtained under favourable conditions.

Several years later, the DH.66 was pioneering new routes in the East, and for the first time radio operators became part of the crew. Their sets were the AD.6 combined transmitter and receiver, and the frequency on which they operated MF was largely determined by the length of aerial used! Incidentally, the operation of the first Empire air routes with DH 66 aircraft fitted with this Marconi equipment, was exactly a quarter of a century ago being inaugurated on the 27th December 1926.

It was not, however, until the early 1930's that aircraft radio became dependably serviceable with the introduction of the AD.8 high powered MF transmitter fitted to Calcutta class flying-boats, followed by the AD 41/42 to Kent class flying-boats and the Dragon, Rapide and DH.86 class of landplanes. The HP.42 was originally fitted with the AD.6M equipment, subsequently being brought up to date with the later type. When all these aircraft operated overseas they were in many cases fitted with the AD.37 short wave transmitter.

In 1932/33 the Armstrong Whitworth Atlantas used this type of apparatus, but in all its operations it was never too successful. It was not until the AD.57/5862 equipment came into service with the "C" class flying-boats in 1936 that short wave radio was really effective. This equipment, and the later improved and more highly powered AD.67/6872 radio, was used

on the pioneer trans-Atlantic flights of 1937 and onwards. The "Ensign" class, commissioned in that year, were the first landplanes to have similar short wave equipment.

* * *

Introduction of short wave radio brought many advantages. There was far less jamming and congestion on these frequencies, since far fewer operators were using them, and the range which, with medium wave radio was only a few hundred miles at best, was increased to several thousands. In that year, too, Imperial Airways started for the first time their own radio maintenance in Britain. The first radio engineers were former flying radio officers who transferred to the ground to get this service going. They were men whose keenness and ingenuity had kept the radio installations in the Imperial Airways aircraft serviceable in all parts of the world, often under very trying conditions, and their experience of radio maintenance was of inestimable value.

The war drastically curtailed any further civilian radio development. B.O.A.C. (as Imperial Airways had now become) flew whatever planes and whatever equipment they could get, and had no time for pioneering modifications. After the war the Corporation found itself with a variety of planes origin. The Hythe, Plymouth and the later Solent flying-boats all were fitted with the 1154/55 radio sets (which are still in use today on some older type aircraft); the landplanes also had this famous wartime mass produced equipment. As far as radar and DF went, the flying-boats had a device called the Marconator, American radio compasses and A.S.V. (Air to Surface Vessel). The landplanes were fitted with the R.A.F. Rebecca Mk. 11 radar.

It was not until B.O.A.C. placed into service the Canadair Argonaut in 1949 that redesigned civilian radio equipment was fitted for general service. For some time before the introduction of the Argonauts there had been intensive behind-the-scenes activity to devise standardised miniaturised radio and radar equipment. Consultation between the Corporation, the radio industry and manufacturers resulted in the laying down of specifications for equipment which are still effective.

This new specification and design was designed primarily to save weight, and this it did up to practically 50 per cent by the "miniaturising" of all radio equipment. At the same time maintenance was revolutionised by the introduction of the system of "unit replacement". The international agreements then being concluded under the auspices of PICAO called for an exactitude of frequency that could not be met by the variable tuning of the 1154/55, and therefore crystals were introduced for this purpose. Marconi's designed this equipment—107/108—which consisted of short wave transmitter, medium and short wave receiver and separate DF, with dual radio compasses, visual and oral.

Radio telephony, whereby the pilot speaks to the airport controller was not in use in pre-war days, but the post-war system of air traffic control made this essential, and VHF R/T was incorporated into the equipment. This was made by Standard Telephones and Cables, who also designed the miniaturised Instrument Landing System. An intercommunication system between crew members designed by Ultra was also specified. Radar equipment was still Rebecca Mk II, which is the only equipment in this field not miniaturised. Development in this is being pushed ahead, and 1000 megacycle Distance Measuring Equipment has been mentioned in this connection.

All B.O.A.C.'s British aircraft subsequent to the Argonaut (the Hermes and the Comet) are fitted with radio and radar to this specification, all of which is interchangeable between these three types of aircraft.

* * *

Standardisation of aircraft radio facilities was but one step in a fast-developing policy of "streamlining" all radio maintenance and overhaul within the Corporation. Towards the end of 1948 a Radio Maintenance Superintendent was appointed within the existing engineering framework to reorganise radio maintenance in this country and to avoid duplication of radio work in the operating Lines.

Design of the new equipment had established one principle which was of primary importance in the whole of the radio set-up. This was the system of "unit replacement" in the case of failure. Instead of the fault having to be rectified where it occurred on the aircraft, the technique of "unit change" was instituted. In broad lines this system required technicians who could remove these units as and when required, a factory or workshop where they could be made serviceable again, and a small stock of replacement units at strategic points with a reliable system of replenishment to these points.

For overseas unserviceability it was found practical to train the Radio Officers to do their own replacements. In this way a close liaison sprang up between the Radio Officers and the radio engineers, a liaison which exists very firmly and has produced first class results in the lack of delays due to radio trouble.

By the early part of 1949 the radio organisation of B.O.A.C. had established itself into an efficient pattern with the majority of radio work being handled by the Radio Maintenance Unit. Centralisation of all of B.O.A.C.'s services from London Airport meant that it was possible to concentrate the whole of the Radio Maintenance Unit there, and the present-day organisation consists of a factory for the overhaul of radio, radar, and navigational aids, etc., with an outside staff of inspectors and mechanics to deal with the aircraft themselves.

The airport staff—some 70 of them—are organised to deal with about 200 aircraft departures a month and in addition to B.O.A.C. work they handle radio maintenance as required by certain other airlines. The men are organised into six teams each with a team leader, who is a senior Radio Inspector. Each team has several radio inspectors who in turn look after the radio mechanics. Because of the inherent characteristics of radio, it has been found impractical to have one man doing the work on a radio installation and a second man coming along afterwards to inspect it; the reason being that almost invariably the work which needs to be done on a radio installation is a combination of testing and inspection, with little mechanical operation. In this way, therefore, it is found practical and efficient to have the inspectors combine the production and inspection side of radio overhaul and maintenance. The consequent saving in man-hours is of great importance; at the same time there is an increase in the standards of serviceability.

B.O.A.C.'s radio staff on the airport have about 32 radio and radar units to look after in each of the Corporation's passenger aircraft. All the radio Checks I, II and III are carried out on the aircraft, and only on Check IV's (which are major inspections occurring roughly once a quarter) are the units removed to the factory. Apart from checks, all defective units pass through the factory for rectification. To illustrate the volume of work, the Corporation's fleet at present based on London Airport consists of 22 Argonauts, 20 Hermes and 10 Yorks, as well as a fleet of training aircraft of various types. (The Stratocruisers and Constellations are based at Bristol).

An essential duty at the airport is to ensure that every aircraft leaves with the correct crystals for the radio frequencies it will encounter at all points on the routes, plus spares. Since the frequencies in use vary from country to country, and since each installation has to be provisioned for its complete operating route, the exacting nature of this task is easily apparent.

Some idea of the volume of work covered by the Radio Maintenance Unit can be gained from the following figures:—

		Man Hours	
Average Argonaut aircraft checks per annum		1,128	36,804
" Hermes " " " "		936	34,164
" York and Training " " " "		144	5,916
" Comet " " " "		36	1,092
Average number of units passed through factory per annum		21,320	85,280

The factory also houses the headquarters of the unit, and here are kept the highly organised records upon which depends the economical running of the system. Under the control of the Radio Maintenance Unit there are some 6,000 component items, plus another 2,000 major units, each worth about £200-£300, so it will be seen that in the interests of economy only the smallest amount of spare equipment must be held. The records office ensures that this is possible by keeping an up-to-the-minute check of the location of every radio and radar unit, so that emergency and routine requirements can be met without delay; also that an even distribution of spare units is maintained over all routes.

Another section of the records office keeps a detailed check with the help of graphs on all forms of serviceability, so that any fall below the average can be instantly recognised and dealt with; this means that persistent "snags" can be eliminated and a strict check kept on the cost of maintaining serviceability.

"Personal histories" of each unit are also kept so that it is possible to tell by reference to the card index exactly what has happened to that unit in past inspections; whether it has shown signs of recurring defects and is up to date in its modification state.

The fact that the radio or radar equipment is at all times kept within the unit is an important feature, for in this way it is possible to keep an almost personal eye on every major installation—and even on the aircraft it is still the responsibility of the men of the Radio Maintenance Unit. This interest has resulted in a fine spirit of keenness throughout the Unit and has meant that there is virtually no separation between the overhaul and the maintenance side of the work.

Test rigs designed within the unit to speed work and increase efficiency have been installed for many of the overhaul operations. Typical of these is a rig which in three or four hours simulates the work of a hundred flying hours on a rotary transformer, and should there be any failure during this time it automatically pin-points the defect. Another rig tests large number of valves simultaneously, under simulated conditions of operation, and again in case of a failure indicates the unserviceable value.

The unit, in conjunction with the Development Branch, also designed the weather-proof, damp-proof, shock-and damage-proof transit cases in which serviceable radio and radar units are sent to any part of the world under a seal of serviceability. These cases can be dropped on any corner on to a concrete floor from a height of four feet and their contents will be undamaged and fit for immediate installation into an aircraft, the certification holding good.

Keenness to see good results from the work is encouraged within the unit. Should there be any increase in unserviceability or any increase in the costs of maintenance or overhaul, the men themselves are genuinely concerned to find the reason. Team leaders meet with the Superintendent whenever necessary to discuss new treatments, techniques, and equipment to give increased efficiency and productivity.

The staff are aided by the knowledge that the technical officers who run the various sections of the unit are all practical men, with many years in aircraft radio work and with a wide knowledge of all the places where the equipment will be used and the problems connected with its use.

The man who has been in charge of the unit from its inception, is the Superintendent of Radio Maintenance, Mr. R. D. Lanser. He started in radio nearly 24 years ago. After flying with the R.A.F. as a Radio Officer he came to the Corporation in the same capacity in 1936, and became a ground engineer some time later.

Summarising the aims of the Radio Maintenance Unit he says: "The system the unit is operating has been based on the belief that aircraft radio should require maintenance and overhaul at the main base only. This is the aim of all concerned, so that an economic and efficient standard is maintained to the requirement of the operating Lines. In fact, the keenness of all radio staff is enabling this to be achieved.

Pan American Increases Service to U.S.A.

5 Clipper Flights Weekly via Sunny Southern Route

Only Pan American offers 5 flights a week from Hong Kong to the U.S.— 3 flights via Tokyo, 2 via Manila. You can fly straight through to the U.S. — or stop over in beautiful Honolulu.

Only Pan Americas offers pioneer flight experience with Stratocruisers . . . . has operated them for more miles, more flying hours than any other airline. From Tokyo or Manila, where you connect with the "Strato" Clippers, you enjoy Sleeperette service* at no extra charge. Berths only $25 extra.

Only Pan American offers direct service to 4 gateway cities . . . Los Angeles, San Francisco, Portland, Seattle.

3 Clipper flights weekly via Tokyo
2 Clipper flights weekly via Manila

For reservations, call your Travel Agent or . . .
Hong Kong Hotel, Phones 31639, 31830
Peninsula Hotel, Phones 57585, 57675, 57694
Hong Kong

*Trade Mark, Pan American World Airways, Inc.

PAN AMERICAN
World's Most Experienced Airline

Pan American World Airways, Inc., Incorporated in the State of New York, U.S.A., with limited liability

THE HONG KONG JOCKEY CLUB

SECOND RACE MEETING

Saturday 12th & Saturday 19th January, 1952.

(Held under the Rules of the Hong Kong Jockey Club).

The First Bell will be rung at 1.30 p.m. and the First Race will be run at 2.00 p.m. each day.

There are 8 races on the 1st Day and 8 races on the 2nd Day (16 in all).

Through Tickets (at $32.00 each) may be obtained at the Compradore Office of the Treasurers, 1st Floor, Telephone House, also tickets for the Cash Sweep on the last race of the First Day of the Meeting on 12th January, 1952, as well as the Special Cash Sweep on the "Pearce Memorial Cup" scheduled to be run on 16th February, 1952.

Through Tickets reserved for this Meeting but not paid for by 10.00 a.m. on Friday, 11th January, will be sold and the reservation cancelled for future meetings.

To avoid congestion at the Club's Office at Telephone House, non-members are requested to purchase their sweep tickets at the Club's Branch Offices at:—

5 D'Aguilar Street, Hong Kong

or

382 Nathan Road, Kowloon

TOTALISATOR

The attention of Totalisator Investors is drawn to the following rules:—

Dividends will be paid on the winning and placed ponies so declared by the Stewards when the "All Clear" is given. The "All Clear" signal will be indicated by a white light and/or a white sphere at the Totalisator Tower. BACKERS ARE ADVISED NOT TO DESTROY OR THROW AWAY THEIR TICKETS UNTIL AFTER THE "ALL CLEAR" SIGNAL HAS BEEN EXHIBITED.

Totalisator Tickets should be examined and checked before leaving the Selling Counters as mistakes of any description cannot be rectified later.

Cash received in respect of Dividends should be checked before leaving the Pay-Out Counters as no claim for short payment of the value of tickets presented can be entertained once Investors have left the Counters.

All winning tickets and tickets for refunds must be presented for payment at the Race Course on the day to which they refer, but none will be paid later than one hour after the time for which the last race of the day has been scheduled to be run.

In no circumstances will any Dividends be paid or refunds made unless a ticket is produced. Payment will NOT be made on torn or disfigured tickets.

MEMBERS' BADGES AND ENCLOSURE

Members and guests are reminded that they and their ladies MUST wear their badges prominently displayed throughout the Meeting.

NO ONE WITHOUT A BADGE WILL BE ADMITTED TO THE MEMBERS' ENCLOSURE.

Badges admitting ladies not in possession of Brooches or Season tickets and gentlemen, non-members of the Club, to the Members' Enclosure and Club Rooms at $10.00 per day including tax, for ladies or gentlemen are obtainable through the Secretary at Telephone House, on the written or personal introduction of a Member, such member to be responsible for all visitors introduced by him, and for payment of all chits, etc.

Only a limited number of badges admitting to Members' Enclosure will be on sale at the Race Course.

The Branch Offices and the Treasurers' Compradore Office will close at 11.00 a.m. on both days. The Secretary's Office will close at 11.45 a.m. each day. The Treasurers' Compradore Office and the Secretary's Office are situated at 1st Floor, Telephone House.

A limited number of tiffins will be obtainable at the Club House provided they are ordered in advance from the No. 1 Boy (Tel. 27818).

NO CHILDREN WILL BE ADMITTED TO THE CLUB'S PREMISES DURING THE MEETING.

PUBLIC ENCLOSURE

The price of admission to the Public Enclosure is $3.00 each day including tax for all persons including ladies, and is payable at the Gate.

BOOKMAKERS, TIC TAC MEN ETC., WILL NOT BE PERMITTED TO OPERATE WITHIN THE PRECINCTS OF THE HONG KONG JOCKEY CLUB.

MEALS AND REFRESHMENTS WILL BE OBTAINABLE IN THE RESTAURANT IN THE PUBLIC ENCLOSURE.

SERVANTS' PASSES

Servants' passes will be issued to private box holders only, who are requested to distribute them with discrimination and to endorse their names on the passes. Holders of such passes are not permitted in the Members' Enclosure except for passing through on their duties and must remain in their employers' stands.

Owing to the congestion in the Members' Betting Hall and at Booths adjacent to Boxes in the Coffee Room, Box-holders and Members are requested to ensure that their servants make use **only of the Public Betting Hall.** Military Police will be posted at various points in the enclosure to ensure that this regulation is adhered to.

By Order,
H. MISA,
Secretary.

TOURIST SERVICE BY B. O. A. C.

B.O.A.C., which for many years has favoured a policy of cheaper air travel for the public, intends to introduce tourist services on the North Atlantic between the U.K. and the U.S.A. and Canada from 1st May, 1952. These services will be operated with an increased seating capacity and at a reduced fare. Accommodation for some 400 extra passengers weekly will be available across the North Atlantic in fast Constellation airliners, five of which are being modified for this purpose. The London to New York tourist return fare will be £173.12s. in the summer months and £148.19s. during the off-season period, compared with £254 full return fare at the present time. The one way fare will be £96.9s.

The tourist service Constellations, which are expected still further to increase the Corporation's dollar-earning capacity, are to be equipped with 68 comfortable, reclining seats (compared with the 43 seats normally fitted), with full leg room for passenger comfort. A feature of the seating arrangement will be its flexibility. When not used for tourist services the 14 aisle seats can be removed at short notice for normal first-class or special services. It will be possible also to fold the first six rows of seats against the sides of the fuselage to enable cargo to be carried. Meanwhile, a new air conditioning and pressurisation system is being installed in the aircraft.

From the passenger's point of view the B.O.A.C. tourist service will differ from the first-class service only by dispensing with some of the luxuries normally available on the latter. Adequate meals, for which passengers will pay, will be served on the aircraft. The number of operational crew on each aircraft will remain unchanged—for there will be no reduction in B.O.A.C.'s high operational standards—but only two cabin attendants will be carried instead of the usual four on first-class services.

"It will be a good, honest, adequate service but without the frills," said Sir Miles Thomas, B.O.A.C.'s Chairman. "I am sure that tourism will spread in due course to other routes than the North Atlantic," Sir Miles added. "And I am also sure that we in B.O.A.C. will be well prepared for that development too." It is interesting to recall that as long as 24 years ago B.O.A.C.'s predecessor, Imperial Airways, announced the success of second-class air fares which had been introduced on the services between London and Paris.

新華信託儲蓄商業銀行

SIN HUA Trust, Savings & Commercial Bank, Ltd.

(Incorporated in China, 1914)

Hongkong Branch: Marina House

Tel: 32111, 31221—31222.

The French Motorcar Industry

With a production of 357,552 motor-vehicles (touring and utility cars) France ranked fifth in world production in 1950, coming after the United States, Great Britain, the Soviet Union and Canada. Like prior to the war, three firms: Renault, Citroen and Peugeot cover approximately two thirds of the French motorcar production.

The French builders' efforts were brought to light on the occasion of the Show which was held in Paris from 4th to 14th of October. This quite Parisian manifestation which by tradition is regarded in motorcar circles as the most important event of the year, gathered together 98 builders and 90 body-makers (French and foreign). The number of visitors amounted to over one million. Some of the French builders' most interesting achievements exhibited at the Show had already been revealed during the year: the Renault 11 Hp Fregate which was presented to the Press already in November 1950 and which begins to be turned out on a mass production basis, is a luxury 6-seater, whose body is characterized by an extremely low forward motion strength factor, the Simca 9 Aronde, which is mainly remarkable for its body of modern outline, for the production of which its builders have invested the sum of 10 milliards of francs and who have just completed the installation of huge plants covering 26,000 square meters, la Comete (The French Ford Works), whose characteristics are that of the Vedette car, considerably improved as regards the body.

A new type of body has been added to the 1951 range of the Peugeot 203 cars, the two-seater cabriolet with folding hood. Samson, for its part, presents a new car, a 13 HP: the Randonnee. The fastest Panhard model is the Dyna Junior with a roadster body, whose Dyna 120 Sprints motor with 38 effective HP permits the 130-135 km/h speeds. The small Dyna Panhard cars will be fitted with an automatical speed-gear box early in 1952 on a mass-production basis, as the Research Department of that firm have started adapting the Kreis licenced automatical box to the "Dyna" cars.

As regards utility vehicles, in addition to the over-increasing range of bodies adapted for determined requirements (high luxury cars, isothermic waggons, advertising cars, sanitary cars, fire cars, garbage tipe-lorries ambulance cars, disinfection cars, police cars, tank car, trailers of every description, etc.) let us mention the 10-ton chassis with gas turbines presented by Lafly.

French exports of passenger cars amounted to 61,886 units in 1950, as against 10,944 only in 1938. In a parallel line, exports of utility vehicles passed from 969 units in 1938 to 8,546 in 1950. These exports are shared as follows: Belgium, the Netherlands, Switzerland and the United Kingdom remain, by tradition, France's best customers: they even increased their purchases five and sixfold as compared with the pre-war period (with 29,302 cars in 1950), their relative share in French total exports however remaining very much the same as in 1938. On the other hand, although France has lost some markets in Eastern Europe since the war, she has reversely noted a considerable increase in the number of orders from other countries, such as Sweden which had received 776 French cars in 1938 and purchased 8,318 in 1950, that is, eleven times more, and the United States, the most important manufacturer in the world, purchased 2,858 cars from France in 1950, while they sold to her only 1,765.

THE FLEET OF THE P. & O. AND OF THE B. I.

The fleet of the **PENINSULAR & ORIENTAL STEAM NAVIGATION COMPANY** (Incorporated by Royal Charter 31st December, 1840) and of the **BRITISH INDIA STEAM NAVIGATION CO., LTD.** (Incorporated 1856) consists at present of the following ships:—

P. & O. FLEET

Vessel	Gross Tons	Vessel	Gross Tons
Bulan	1,048	Strathmore	23,580
Cannanore	7,066	Strathnaver	22,270
Canton	16,033	Surat	8,925
Carthage	14,283	Trevose	7,365
Chitral	15,555	Tresillian	7,373
Chusan	24,215	Trevethoe	7,365
Corfu	14,280		
Coromandel	7,065	Total	425,550
Devanha	7,367		
Dongola	7,371	Building:	
Himalaya	27,955	S.....	28,000
Karmala	7,673	S.....	28,000
Khyber	7,675	S.....	9,200
Maloja	21,036		
Mooltan	21,039		65,200
Palana	11,063	Tonnage Building	
Paringa	11,063	P & O Total	468,647
Perim	9,550	Total Tonnage of Associated Lines	2,340,890
Pinjarra	9,892		
Ranchi	16,974	Tonnage building of Associated Lines	222,930
Shillong	8,934		
Singapore	9,236		
Socotra	7,840	Grand Total	2,563,820
Somali	9,080		
Soudan	9,080		
Strathaird	22,568		
Stratheden	23,732		

B.I. FLEET

Amra	8,314	Mombasa	2,213
Aronda	8,396	Mtwara	2,629
Barala	3,193	Mulbera	9,108
Canara	7,024	Obra	5,695
Carpentaria	7,268	Okhla	5,732
Chakdara	7,000	Olinda	5,424
Chakdina	7,000	Ordia	5,449
Chakrata	7,000	Ormara	5,444
Chanda	6,921	Orna	6,779
Chandpara	7,274	Ozarda	6,895
Chantala	7,551	Pachumba	7,282
Chilka	7,132	Padana	7,541
Chindwara	7,525	Palamcotta	6,662
Chupra	6,957	Palikonda	7,434
Chyebassa	7,043	Pemba	7,449
Dara	5,030	Pentakota	6,672
Daressa	5,180	Pundua	7,295
Dilwara	12,555	Purnea	5,340
Dumra	4,867	Rajula	8,478
Dunera	12,615	Sangola	8,646
Durenda	7,241	Santhia	8,908
Dwarka	4,851	Sirdhana	8,608
Fultala	4,589	Sirsa	5,427
Gambhira	5,215	Sofala	1,031
Garbeta	5,323	Tabora	390
Goalpara	7,274	Tairea	7,933
Ikauna	6,793	Umaria	6,835
Ismaila	6,793	Urlana	6,835
Itaura	6,793	Warora	3,668
Itinda	6,619	Warla	3,668
Itola	6,793		
Itria	6,854	Total Tonnage	477,676
Kampala	10,304	Building:	
Karanja	10,294	Chinkoa	7,000
Kenya	14,434	Uganda	15,000
Kilwa	2,653		
Landaura	7,289	Tonnage building Total	22,000
Madura	9,032	Tonnage in Service	490,966
Mantola	9,065		
Masula	7,324	Grand Total	512,966
Matiana	9,045		
Modasa	9,073		

HONGKONG'S TRADE FOR NOVEMBER 1951

The total volume of trade for November, 1951, at $631.0 million showed a decrease of 9.% in value compared with the preceding month of October. Imports at $398.9 million were down by 6.9% and exports at $241.1 million down by 12.1%.

Figures for trade with China and Macao are shown in millions of dollars below, last month's figures being given in brackets:—

	Imports	Exports	Total
China, North	25.8(23.3)	16.8(22.8)	42.6(46.1)
China, Middle (excluding Formosa)	5.0(4.9)	6.1(6.6)	11.1(11.5)
China, South	46.8(38.1)	32.8(43.4)	79.6(81.5)
Formosa	3.0(3.6)	15.6(16.2)	18.6(19.8)
Macao	9.2(9.1)	11.3(15.7)	20.5(24.8)
Total	89.8(79.0)	82.6(104.7)	172.4(183.7)

The item which showed the largest increase in imports from North China was casein and albumen from a mere $372,000 to $3.6 million while imports of pigs' and boars' bristles were down by nearly $3.0 million. Exports to North China of chemical elements and compounds; pharmaceutical products fell from $6.3 million to $3.2 million; dyeing, tanning and colouring substances from $2.8 million to $0.7 million; paper and paperware from $2.6 million to $0.7 million; and non-electrical machinery, apparatus and appliances from $2.6 million to $1.2 million. On the other hand exports of textile fabrics and small wares increased from $2.2 million to $7.1 million.

Imports from South China of wood oil were up by nearly $5.0 million; vegetables, roots and tubes, chiefly used for human consumption up by $1.2 million. Exports to South China of chemical elements and compounds; pharmaceutical products fell from $11.4 million to $8.3 million; dyeing, tanning and colouring substances from $3.5 million to $0.7 million; and paper

Hongkong's Imports & Exports in November & for the first eleven months of 1951

Imports of merchandise into Hongkong during November, amounted to a declared value of $389.904,915 as compared with $427,173,863 in November, 1950. The figures include Government sponsored cargoes. Exports of merchandise totalled $241,141,-933 as compared with $442,703,957 in November, 1950. Imports during the first eleven months of 1951 amounted to $4,-412,807,596 as compared with $3,351,499,-409 in the first eleven months of 1950. Exports totalled $4,153,592,746 as compared with $3,337,773,916.

and paperware from $2.5 million to $1.5 million.

Exports to Macao of tobacco and chemical elements and compounds; pharmaceutical products were down by $2.4 million and $0.9 million respectively.

Figures in millions of dollars for trade during November with specific localities of China or by specific routes are as follows (last month's figures are shown in brackets):—

	Imports	Exports
Shanghai (by rail)	4.9(8.5)	10.4(8.8)
Shanghai (by sea)	5.5(4.2)	1.1(2.3)
South China (by land) .	9.5(7.0)	21.6(25.4)

United Kingdom:— Trade with the United Kingdom registered increases both in imports and exports of $4.3 million and $3.2 million respectively. The principal items of increases in imports were sheep's and lambs' wool, scoured up by $4.1 million and vehicles and transport equipment up by $1.6 million. Exports of casein and albumen, most of which were imported from North China, increased sharply from a mere $26,000 to $4.2 million.

Australia:—Imports rose from $2.8 million to $12.8 million; meat and preparations thereof up by $4.4 million; dairy products, eggs and honey up by $1.3 million; sheep's and lambs' wool, scoured up by $1.2 million; and hides and skins and leather up by $1.1 million being the chief items. The fall in exports of $1.4 million was mainly due to a decrease in exports of wood oil.

Canada:—Imports fell by $5.0 million; the decrease being spread over a wide range of commodities, notably wheat flour which was down by $1.2 million.

India:—Imports valued at $4.3 million, showed a decrease of over 40%. Tobacco and gunny bags down by $1.9 million and $1.4 million respectively were the chief items.

British Malaya:— Imports dropped by $36 million; the principal item affected being gas oil and fuel oil down by $1.8 million. Exports also showed a decrease of $5.9 million; mainly due to decreased exports of clothing and underwear of textile materials down by $3.4 million; fruits and nuts, except oil nuts down by $1.4 million; and textile fabrics and small wares down by $1.2 million.

Pakistan:— Exports of yarns and threads fell heavily from $17.3 million to $10.0 million.

France:—Imports showed a reduction of $2.7 million with chemical elements and compounds; pharmaceutical products down by $1.9 million, but iron and steel imports were up by $1.9 million.

French Indochina:— The decrease in imports of $8.1 million was mainly due

TOTAL VALUES OF IMPORTS & EXPORTS BY COUNTRIES FOR THE MONTHS OF NOVEMBER, 1951 & 1950.

	IMPORTS		EXPORTS	
	November 1951	November 1950	November 1951	November 1950
MERCHANDISE	$	$	$	$
United Kingdom	60,901,891	35,950,639	13,050,897	13,103,246
Australia	12,775,355	5,045,933	5,008,577	4,084,252
Canada	5,865,421	4,899,273	1,696,961	660,449
Ceylon	93,405	70,589	1,010,130	1,446,446
East Africa (Br.)	1,484,637	896,547	881,740	1,118,588
India	4,313,600	11,823,830	1,417,129	3,691,300
Malaya (Br.)	7,791,944	75,880,872	41,682,019	77,191,852
New Zealand	950,581	217,412	287,959	254,293
North Borneo (Br.)	1,299,771	439,723	562,806	1,431,499
Pakistan	2,396,488	7,820,680	12,118,225	11,156,260
South Africa	1,672,509	1,349,864	236,242	1,702,289
West Africa (Br.)	—	—	377,611	1,254,849
West Indies (Br.)	—	—	403,499	941,783
Br. Commonwealth, Other	982,235	6,110,628	1,791,839	1,747,893
Austria	1,611,629	301,660	—	1,008
Belgium	6,913,645	2,257,014	594,347	1,847,278
Burma	1,130,493	3,450,696	2,912,207	724,682
Central America	45,133	1,193,167	963,617	1,028,756
China, North	25,836,740	27,884,023	16,767,026	102,846,976
China, Middle (excl. Formosa)	5,005,644	4,032,487	6,056,433	7,296,983
China, South	46,787,211	41,834,296	32,769,366	61,451,517
Formosa	3,001,385	13,129,880	15,631,945	26,846,182
Czechoslovakia	952,321	475,359	—	—
Denmark	1,524,844	509,550	267,610	847,801
Egypt	221,572	5,833	24,070	2,144,244
Finland	2,039,377	294,594	—	—
France	7,204,860	3,647,924	1,772,624	2,089,642
French Indo-China	2,222,343	1,990,324	2,638,023	1,727,996
Germany	23,081,822	3,764,500	2,072,471	9,921,971
Holland	14,205,020	5,851,314	4,421,515	5,792,691
Iraq	—	—	23,288	37,544
Italy	14,199,192	4,860,944	747,956	2,823,549
Japan	46,584,658	49,144,473	6,709,475	16,155,039
Korea (North)	—	—	—	—
Korea (South)	217,808	—	3,042,628	192,655
Macao	9,159,348	11,506,685	11,348,302	16,214,354
Norway	2,828,677	300,932	578,069	488,655
Oman	26,000	96,600	490,832	60,475
Persia	—	306,134	—	44,675
Philippines	1,068,772	1,959,071	4,770,748	8,420,254
Poland	547,373	216,578	—	—
Portugal	42,488	99,198	24,791	381,514
Portuguese East Africa	22,948	—	83.883	162 412
South America	11,266,535	1,771.399	913,055	1,169,690
Spain	57,438	9.178	—	—
Sweden	5,793,510	858,474	139,774	960.245
Switzerland	11,600,183	8,788,939	584,931	201 704
Thailand	14,215,499	22,905,312	9,452,417	10,116.620
Turkey	—	—	—	248,456
U. S. A.	18,584,912	54.544,453	17,015,410	25,513,830
Indonesia	10,113,025	7,678,300	16,403,366	13,200,025
U. S. S. R.	602,624	165,152	—	—
All Other Countries	1,472,049	833,440	1,405,976	1,869,535
TREASURE				
United Kingdom	1,041	—	1,880,312	—
North Borneo (Br.)	—	—	159,350	211,904
Macao	3,952,440	287,264	—	—
Thailand	—	—	394,000	137,110
TOTAL MERCHANDISE	389,904,915	427,173,863	241,141,933	442,703,957
TOTAL TREASURE	3,953,481	287,264	2,433,662	349,014
GRAND TOTAL	393,858,396	427,461,127	243,575,595	443,052,971

TOTAL VALUES OF IMPORTS & EXPORTS BY COUNTRIES FOR THE PERIODS JAN. TO NOVEMBER, 1950 & 1951

COUNTRIES	IMPORTS Jan.-Nov. 1951	IMPORTS Jan.-Nov. 1950	EXPORTS Jan.-Nov. 1951	EXPORTS Jan.-Nov. 1950
MERCHANDISE	$	$	$	$
United Kingdom	560,151,447	372,536,508	205,684,375	154,325,495
Australia	83,770,058	75,200,079	69,116,299	36,521,125
Canada	75,769,389	44,023,353	15,981,544	9,578,350
Ceylon	3,114,286	1,926,364	7,364,199	8,575,546
East Africa (Br.)	12,693,782	3,317,042	12,916,178	8,639,193
India	152,767,628	149,922,815	24,226,567	20,769,936
Malaya (Br.)	384,851,968	256,613,455	696,641,068	463,094,070
New Zealand	2,321,282	1,031,701	5,974,883	3,455,976
North Borneo (Br.)	26,285,853	10,329,443	13,958,009	13,832,782
Pakistan	126,169,697	84,449,997	174,624,436	123,238,469
South Africa	15,963,838	12,003,455	15,888,182	12,244,028
West Africa (Br.)	—	57,008	12,657,642	7,939,386
West Indies (Br.)	15,468	25,131	6,891,889	8,867,173
Br. Commonwealth, Other	64,401,691	35,862,119	27,545,980	13,182,034
Austria	16,189,064	7,330,987	—	82,723
Belgium	115,588,772	26,672,183	9,878,387	14,914,313
Burma	5,838,594	15,430,719	38,396,879	22,800,702
Central America	3,538,224	6,381,539	9,141,074	8,090,439
China, North	297,521,780	322,136,387	513,811,758	584,678,086
China, Middle (Excluding Formosa)	47,790,725)	115,770,586	72,573,334)	339,018,158
Formosa	57,995,157)		120,724,567)	
China, South	422,085,501	322,502,934	965,597,710	360,054,158
Czechoslovakia	11,887,472	10,220,623	11,032	48
Denmark	15,531,064	4,040,704	8,771,090	9,346,008
Egypt	16,405,853	711,261	6,383,263	8,027,853
Finland	7,839,237	3,574,180	28,160	56,085
France	116,654,199	38,968,846	26,897,291	10,336,339
French Indochina	47,575,223	28,554,677	29,742,298	21,025,500
Germany	191,537,881	32,505,627	29,813,707	46,832,571
Holland	114,208,894	45,027,145	47,026,472	41,885,184
Iraq	70,430	10,000	211,420	279,861
Italy	109,249,676	31,897,541	15,658,880	19,343,194
Japan	342,883,672	174,352,532	183,688,386	112,153,467
Korea (North)	—	19,219,169	—	7,777,032
Korea (South)	3,708,019	22,970,836	20,694,468	22,779,762
Macao	95,468,040	95,722,963	216,008,681	194,215,243
Norway	25,144,510	18,262,400	5,443,588	5,613,733
Oman	174,700	251,600	2,653,309	656,811
Persia	1,278,882	1,047,318	312,507	280,903
Philippines	11,770,268	15,485,066	58,665,591	74,743,245
Poland	5,540,945	3,343,239	—	—
Portugal	3,720,292	1,257,884	341,472	899,586
Portuguese East Africa	4,049,501	1,151,460	1,625,764	1,571,414
South America	52,045,265	3,894,210	11,022,957	16,242,253
Spain	1,384,181	579,001	18,435	587,493
Sweden	42,171,237	22,425,081	4,651,976	7,878,156
Switzerland	119,122,969	63,036,646	4,812,764	3,273,070
Thailand	139,278,544	173,294,522	77,680,294	93,632,696
Turkey	13,998,816	192,978	1,039,129	1,753,165
U. S. A.	341,298,809	579,703,803	130,201,573	288,598,304
Indonesia	82,097,352	72,670,722	222,373,745	109,514,628
U. S. S. R.	2,236,022	955,952	—	—
All Other Countries	19,626,439	22,647,618	28,219,434	24,568,174
TREASURE				
United Kingdom	7,791	4,377	16,766,192	17,360,349
Canada	—	—	—	22,500
North Borneo (Br.)	—	—	1,108,320	270,300
China, North	—	110,000	—	—
China, Middle (Excluding Formosa)	13,400)	146,000	—)	5,461,409
Formosa	600)		—)	
China, South	—	10,272,832	—	20,311
Holland	—	—	24,872	—
Macao	17,554,378	4,595,277	—	—
Switzerland	—	—	25	—
Thailand	—	—	2,717,402	1,003,694
U. S. A.	—	10,300	200	14,990,199
TOTAL MERCHANDISE	4,412,807,596	3,351,499,409	4,153,592,746	3,337,773,916
TOTAL TREASURE	17,576,209	15,138,786	20,617,011	39,128,762
GRAND TOTAL	4,430,383,805	3,366,638,195	4,174,209,757	3,376,902,678

to the absence of white rice shipments, imports of which for the last month amounted to $7.0 million. Exports also recorded a decrease of $1.2 million.

Germany:—Imports went down by $2.4 million; nil import of fertilizers as against $1.5 million for the previous month being the chief cause.

Holland:—The reduction in exports of $1.6 million was mainly caused by the decreased exports of non-ferrous base metals.

South Korea:—Exports of yarns and threads fell from $4.1 million to $1.1 million.

Japan:—While exports to this country showed a slight decrease of $0.8 million; imports went up by over 50% to $46.6 million. Chief items of increase in imports were textile fabrics and small wares from $9.6 million to $17.6 million and iron and steel from $3.3 million to $5.9 million.

Thailand:—Imports showed an all round decrease of $2.7 million except white rice which was up by $1.6 million.

Switzerland:—The decrease in imports of $1.6 million was almost entirely due to decrease imports of chemical elements and compounds; pharmaceutical products.

Indonesia:— Exports valued at $16.4 million showed an increase of $6.8 million. Chief items were textile fabrics and small wares up by $1.8 million; manufactures of base metals up by $1.7 million; yarns and threads up by nearly $1.0 million; and clothing and underwear of textile materials up by $0.9 million.

U.S.A.:—Imports fell from $33.1 million to $18.6 million. Main items responsible for the decrease were tobacco down by $6.4 million; fruits and nuts, except oil nuts down by $1.9 million; textile fabrics and small wares down by $1.4 million; and chemical elements and compounds; pharmaceutical products down by $1.3 million. Exports, on the contrary, recorded a rise of $3.1 million; silk waste and floss silk up by $1.2 million; silk waste and floss silk up by $1.2 million being the principal item.

Certificates

A total of 3,573 Imperial Preference Certificates and Certificates of Origin were issued during the month.

An additional 1,465 Essential Supplies Certificates were approved in November making a total of 13,190 issued since the middle of December, 1950. 72 other applications were cancelled and 233 refused, while 214 were still under consideration.

DIABETES, WHY WORRY?

When D. T. Lim's Diabetes Herb Tea can give you speedy relief. Get your Herb-Tea by your side and eat what you like, when you like.

D. T. LIM & CO.,
24, Prinsep Street, Singapore, 7.
Tel. Add: "LIMSEP" S'PORE

TOTAL VALUES OF IMPORTS & EXPORTS BY CHAPTERS FOR THE MONTHS OF NOVEMBER, 1951 & 1950.

Articles	IMPORTS November 1951	IMPORTS November 1950	EXPORTS November 1951	EXPORTS November 1950
	$	$	$	$
Live animals, chiefly for food	6,717,048	4,418,755	240	900
Meat & preparations thereof	6,063,482	2,169,590	1,085,478	1,247,678
Dairy products, eggs and honey	9,018,402	6,102,879	3,397,588	4,480,981
Fishery products, for food	5,506,245	8,583,999	3,575,223	7,684,561
Cereals	10,977,332	24,904,006	562,984	330,321
Manufactured products of cereals, chiefly for human food	3,393,664	3,975,250	1,937,975	3,222,565
Fruits and nuts, except oil-nuts	8,502,388	6,194,134	3,970,822	4,197,796
Vegetables, roots & tubers, chiefly used for human food & their preparations, n.e.s.	15,494,247	9,892,604	13,129,220	11,663,135
Sugar & sugar confectionery	3,468,266	18,775,842	3,907,512	8,788,708
Coffee, tea, cocoa and preparations thereof; spices	4,802,517	4,679,872	4,147,250	2,938,150
Beverages and vinegars	2,440,841	2,126,355	1,432,218	1,590,725
Feeding stuffs for animals, n.e.s.	1,687,473	599,097	1,804,544	1,931,409
Tobacco	5,102,727	4,774,099	1,956,929	2,570,884
Oil-seeds, nuts & kernels	4,316,266	10,123,566	1,466,459	7,229,112
Animal and vegetable oils, fats, greases and waxes and their manufactures, n.e.s.	16,365,896	14,059,305	7,316,491	19,861,387
Chemical elements and compounds; pharmaceutical products	41,357,056	37,567,313	22,569,788	41,140,466
Dyeing, tanning & colouring substances (not including crude materials)	13,699,924	16,303,305	3,218,853	24,352,655
Essential oils, perfumery, cosmetics, soaps & related products	2,051,700	2,876,548	1,392,267	2,924,897
Fertilizers	628,954	5,272,483	4,713,062	3,771,970
Rubber and manufactures thereof, n.e.s.	3,402,866	62,096,919	92,451	52,852,813
Wood, cork and manufactures thereof	7,650,474	4,308,599	2,020,900	2,199,049
Pulp, paper & cardboard & manufactures thereof	19,339,389	7,103,521	8,494,026	5,719,685
Hides and skins and leather	2,970,385	2,813,703	1,685,821	3,135,532
Manufactures of leather, not including articles of clothing	152,180	160,500	366,963	964,147
Furs, not made up	11,154	—	236,328	117,313

TOTAL VALUES OF IMPORTS & EXPORTS BY CHAPTERS FOR THE PERIODS JAN. TO NOVEMBER, 1950 & 1951

Articles	IMPORTS Jan.-Nov. 1951	IMPORTS Jan.-Nov. 1950	EXPORTS Jan.-Nov. 1951	EXPORTS Jan.-Nov. 1950
	$	$	$	$
Live animals, chiefly for food	46,701,831	38,429,856	122,649	72,286
Meat & preparations thereof	23,276,478	14,774,674	9,806,801	6,004,093
Dairy products, eggs and honey	85,920,674	66,886,157	41,002,926	39,296,090
Fishery products, for food	71,463,641	62,399,092	52,438,559	43,935,196
Cereals	149,882,947	156,674,783	7,040,247	13,778,533
Manufactured products of cereals, chiefly for human food	50,114,843	65,501,099	28,343,850	57,466,498
Fruits and nuts, except oil-nuts	81,439,996	60,602,112	42,096,042	37,073,839
Vegetables, roots & tubers, chiefly used for human food & their preparations, n.e.s.	114,238,351	84,685,379	114,423,784	93,749,633
Sugar & sugar confectionery	95,286,440	89,077,914	88,168,411	63,917,319
Coffee, tea, cocoa and preparations thereof; spices	48,039,130	37,204,205	47,811,050	40,060,204
Beverages and vinegars	34,739,779	27,406,723	17,221,327	14,300,422
Feeding stuffs for animals, n.e.s.	19,209,180	40,266,720	20,129,236	36,864,054
Tobacco	72,270,787	66,633,484	36,841,576	38,847,189
Oil-seeds, nuts & kernels	87,322,768	65,463,828	67,238,362	52,918,626
Animal and vegetable oils, fats, greases and waxes and their manufactures, n.e.s.	153,143,012	204,227,340	137,645,356	203,352,649
Chemical elements and compounds; pharmaceutical products	365,845,305	219,223,483	389,498,521	214,735,287
Dyeing, tanning & colouring substances (not including crude materials)	157,893,271	84,029,341	176,103,453	98,708,672
Essential oils, perfumery, cosmetics, soaps & related products	33,691,602	27,697,504	23,444,880	21,194,444
Fertilizers	45,566,051	38,330,073	57,353,682	54,906,344
Rubber and manufactures thereof, n.e.s.	351,122,028	193,572,935	350,421,308	181,158,778
Wood, cork and manufactures thereof	77,874,799	57,192,827	23,163,195	13,783,447
Pulp, paper & cardboard & manufactures thereof	153,191,154	92,425,103	145,646,027	84,524,035
Hides and skins and leather	34,715,969	24,915,049	20,928,741	22,820,352
Manufactures of leather, not including articles of clothing	1,648,874	1,304,527	7,781,544	6,346,878
Furs, not made up	2,769,236	1,900,568	2,104,809	2,064,479

ing	152,180	160,500	366,963	964,147	ing	1,648,874	1,304,527	7,781,544	6,346,878
Furs, not made up	11,154	—	236,328	117,313	Furs, not made up	2,768,336	1,290,566	3,104,892	3,064,479
Textile materials, raw or simply prepared	28,492,213	17,255,882	4,771,415	12,064,766	Textile materials, raw or simply prepared	273,398,193	189,675,856	73,810,087	196,384,190
Yarns and threads	8,761,661	13,803,549	16,890,125	15,324,014	Yarns and threads	101,973,043	122,833,688	267,977,711	209,306,237
Textile fabrics & small wares	37,337,892	34,473,088	39,063,055	44,137,217	Textile fabrics & small wares	388,706,850	279,463,731	399,018,934	292,895,404
Special and technical textile articles	1,351,307	1,341,659	814,061	1,218,053	Special and technical textile articles	19,634,452	12,850,402	13,894,810	12,822,149
Clothing and underwear of textile materials; hats of all materials	4,033,016	3,165,510	15,022,761	22,420,924	Clothing and underwear of textile materials; hats of all materials	41,610,903	30,374,044	190,404,340	142,674,794
Clothing of leather and fur	56,405	20,345	6,170	5,340	Clothing of leather and fur	277,253	146,719	17,137	18,232
Footwear; boots, shoes and slippers	309,011	148,049	1,235,494	1,873,206	Footwear; boots, shoes and slippers	2,745,173	1,880,144	34,613,533	27,705,659
Made-up articles of textile materials other than clothing	1,832,770	4,659,312	1,983,278	5,957,528	Made-up articles of textile materials other than clothing	26,987,941	53,350,562	41,250,663	82,275,557
Products for heating, lighting and power, lubricants and related products, n.e.s.	10,816,106	10,221,884	376,690	4,715,171	Products for heating, lighting and power, lubricants and related products, n.e.s.	144,470,130	129,631,813	26,427,830	82,930,856
Non-metallic minerals, crude or simply prepared, n.e.s.	2,167,725	2,752,598	1,056,624	3,350,074	Non-metallic minerals, crude or simply prepared, n.e.s.	22,956,306	17,380,142	14,821,982	9,663,189
Pottery & other clay products	1,235,304	1,006,519	526,977	1,058,153	Pottery & other clay products	12,240,455	11,114,870	10,653,166	9,809,095
Glass and glassware	765,386	986,050	726,590	1,161,497	Glass and glassware	14,617,950	8,532,540	14,239,828	8,599,215
Manufactures of non-metallic minerals, n.e.s.	783,168	701,579	227,855	615,714	Manufactures of non-metallic minerals, n.e.s.	9,362,682	5,100,085	6,961,216	3,641,771
Precious metals and precious stones, pearls and articles made of these materials	3,992,388	677,098	1,641,228	1,008,940	Precious metals and precious stones, pearls and articles made of these materials	22,316,418	11,227,551	10,699,752	6,197,129
Ores, slag, cinder	3,774	3,400	1,233,730	3,762,435	Ores, slag, cinder	154,677	970,001	14,549,208	28,357,106
Iron and steel	14,643,785	18,026,097	2,049,961	20,694,053	Iron and steel	207,023,888	113,591,584	202,186,790	103,835,635
Non-ferrous base metals	4,852,679	2,465,117	3,191,352	5,013,126	Non-ferrous base metals	55,741,142	38,769,912	44,058,252	49,935,422
Manufactures of base metals, n.e.s.	9,003,916	6,013,539	9,675,584	17,936,529	Manufactures of base metals, n.e.s.	88,155,383	58,300,774	170,255,613	121,399,909
Machinery, apparatus and appliances other than electrical, n e.s.	9,574,385	6,726,212	4,165,450	8,137,872	Machinery, apparatus and appliances other than electrical, n.e.s.	109,016,494	70,326,012	92,758,686	59,322,266
Electrical machinery, apparatus and appliances	5,228,299	5,490,111	2,451,293	5,545,310	Electrical machinery, apparatus and appliances	79,027,904	54,957,416	66,636,525	35,098,532
Vehicles & transport equipment, n.e.s.	4,839,336	4,453,997	705,588	5,791,501	Vehicles & transport equipment, n.e.s.	64,757,408	43,666,478	67,466,189	36,600,574
Miscellaneous crude or simply prepared products, n.e.s.	19,979,654	11,757,042	19,753,022	19,100,403	Miscellaneous crude or simply prepared products, n.e.s.	152,367,241	129,232,385	186,129,755	203,353,251
Manufactured articles, n.e.s.	24,723,859	21,142,973	19,092,238	26,895,292	Manufactured articles, n.e.s.	217,878,470	147,907,926	296,984,320	172,068,397
TOTAL MERCHANDISE	389,904,915	427,173,863	241,141,933	442,703,957	TOTAL MERCHANDISE	4,412,807,596	3,251,499,409	4,153,592,746	3,337,773,916
GOLD AND SPECIE ...	3,953,481	287,264	2,433,662	349,014	GOLD AND SPECIE ...	17,576,209	15,138,786	20,617,011	39,128,762
GRAND TOTAL	393,858,396	427,461,127	243,575,595	443,052,971	GRAND TOTAL	4,430,383,805	3,366,638,195	4,174,209,757	3,376,902,678

Principal Imports & Exports of Hongkong

PRINCIPAL IMPORTS BY QUANTITY

	Unit	Oct. 1951	Nov. 1951
Swine	No.	25,524	26,405
Poultry	,,	327,162	622,466
Meat and preparations thereof	lb.	664,856	4,966,004
Eggs in the shell	Gross	197,177	209,775
Fish, fresh	Short Ton	736	823
Rice	,,	16,467	9,095
Wheat flour	,,	4,055	2,385
Fresh fruits	,,	6,324	4,270
Dried fruits	lb.	1,072,382	1,582,765
Beans (except soya beans)	Short Ton	6,368	9,750
Beet and cane sugar	,,	12,490	1,537
Oil-seed cake and meal	,,	800	226
Tobacco	lb.	5,010,223	798,143
Oil-seeds, nuts and kernels	Short Ton	2,208	3,521
Groundnut oil	,,	1,608	1,823
Tea seed oil	,,	—	765
Wood oil	,,	836	2,603
Acids and inorganic chemicals	,,	4,414	4,362
Soaps and cleaning preparations	lb.	940,071	692,863
Fertilizers	Short Ton	7,532	1,510
Wood for fuel	,,	29,546	22,841
Charcoal	,,	1,410	2,019
Timber	Cu. ft.	196,646	160,383
Wood, sawn lengthwise	,,	424,295	282,175
Newsprint	Ream	96,067	72,564
Hides and skins	Short Ton	152	100
Leather, including imitation	,,	107	272
Sheep's and lambs' wool	,,	367	690
Raw cotton	,,	3,898	3,117
Yarns of artificial textile fibres	lb.	147,960	182,900
Cotton yarns	,,	393,687	1,167,221
Textile fabrics	Yard	11,687,428	14,821,989
Gunny bags	Piece	553,605	380,986
Coal	Short Ton	21,038	12,350
Motor spirit	Imp. Gall.	1,904,656	1,465,805
Lamp oil and white spirit	,,	226,912	725,635
Gas oil and fuel oil	Short Ton	70,298	43,243
Cement	,,	3,541	7,745
Plate and sheet glass	Sq. ft	1,182,718	477,147
Iron and steel	Short Ton	9,773	10,360
Non-ferrous base metals	,,	1,470	1,036
Crude rubber and rubber substitute (gutta-percha, balata, etc.)	,,	467	410
Motor tyres	Piece	3,054	3,683

PRINCIPAL EXPORTS BY QUANTITY

	Unit	Oct. 1951	Nov. 1951
Eggs in the shell	Gross	88,169	69,237
Wheat flour	Short Ton	1,947	823
Fresh fruits	,,	1,853	896
Dried fruits	lb.	619,895	554,950
Beans (except soya beans)	Short Ton	6,129	7,324
Ginger preserved or prepared (tinned) except in brine	lb.	270,867	287,171
Beet and cane sugar	Short Ton	3,182	3,444
Oil-seed cake and meal	,,	1,202	517
Tobacco	lb.	4,004,278	446,336
Oil-seeds, nuts and kernels	Short Ton	1,202	1,013
Soya bean oil	,,	67	56
Groundnut oil	,,	112	118
Tea seed oil	,,	1	146
Wood oil	,,	1,721	1,477
Acids and inorganic chemicals	,,	2,010	1,837
Soaps and cleaning preparations	lb.	120,884	149,224
Fertilizers	Short Ton	6,743	7,755
Newsprint	Ream	1,750	34,738
Hides and skins	Short Ton	148	127
Leather, including imitation	,,	81	69
Sheep's and lambs' wool	,,	76	88
Yarns of artificial textile fibres	lb.	52,599	178,566
Cotton yarns	,,	5,030,000	3,093,400
Textile fabrics	Yard	16,064,233	21,522,799
Gunny bags	Piece	451,115	185,378
Motor spirit	Imp. Gall.	139,505	66,250
Lamp oil and white spirit	,,	259,837	37,391
Gas oil and fuel oil	Short Ton	997	538
Cement	,,	1,773	4,034
Plate and sheet glass	Sq. ft.	407,028	318,814
Ores	Short Ton	14,960	11,832
Iron and steel	,,	2,240	5,832
Non-ferrous base metals	,,	1,028	670
Electric torches	No.	1,630,879	1,493,913
Crude rubber and rubber substitutes (gutta-percha, balata, etc.)	Short Ton	—	—
Motor tyres	Piece	6	82
Footwear of textile materials of local manufacture, with rubber soles or soles of leather	Doz. pair	29,402	7,924

HONGKONG MANUFACTURED GOODS

Exports in November & Jan.-Nov. 1951

Hongkong manufactured goods exported under Certificate of Origin and Imperial Preference Certificate showed a decline in November, the declared value being $21,976,912 as compared with $24,042,842 in October.

For the period Jan.-Nov. 1951 the total declared value of exports of locally-made goods was $290.2 million (£18.1 million), as against exports amounting to $180.5 million for the eleven months of 1950 or $196.6 m. for the whole of that year.

The chief purchaser of HK goods in November was Pakistan, taking mainly cotton yarn to the value of $7.6 million (Oct. $10.6 million). America (incl. USA) was next with $5.1 m. (Oct. $4.4 m.); Malaya third with $1.9 m. ($1.6 m.); New Zealand fourth with $1.4 m. ($339,354); while the United Kingdom came fifth with $1.1 m. ($1.5 m.).

Over the eleven months, Pakistan took close upon 34% of the total value of exports of locally-made goods, the United Kingdom coming next with around 15%.

HK Manufactures exported Jan -Nov 1951

(In Dollar millions)

	1951	1950
	January-November	
Pakistan	99.3	62.9
United Kingdom	45.2	41.3
America (incl. USA)	34.9	1.5
Burma	18.9	.8
Malaya	14.3	11.2
Br. W. Africa	12.3	8.5
Australia	11.7	7.7
Other Countries	53.6	46.6
Total	290.2	180.5

LOCAL MANUFACTURES EXPORTED UNDER IMPERIAL PREFERENCE CERTIFICATE AND CERTIFICATE OF ORIGIN IN NOVEMBER, 1951.

	$
Europe:	
United Kingdom	1,107,623
North Europe	153,670
Australasia:	
Australia	276,910
New Zealand	1,389,937
America:	
America	5,090,576
Br. West Indies	301,040
Africa:	
South Africa	278,789
Br. East Africa	1,024,768
Br. West Africa	718,434
Port. East Africa	94,447
Egypt	36,235
Asia:	
Malaya	1,878,857
Iraq	10,433
Br. North Borneo	82,432
India	112,787
Ceylon	409,309
Syria	92,072
Burma	434,799
Pakistan	7,647,680
Br. Commonwealth, Other	621,163
Philippines	3,193
Japan	62,587
Taiwan	89,176
Indonesia	40,502
Okinawa	19,493
Total	21,976,912

Certificates of Origin

Imperial Preference Certificates issued	858
Certificates of Origin issued	2,715
	3,573

HONGKONG'S TRADE WITH EAST ASIA

(For October see Review of Dec. 20, 1951, No. 25)

	Imports					Exports				
	November	1951	Jan.-Nov.	1951	1950	November	1951	Jan.-Nov.	1951	1950
	$	% of Total Trade	$	% of Total Trade	% of Total Trade	$	% of Total Trade	$	% of Total Trade	% of Total Trade
Burma	1,130,493	.29	5,838,594	.13	.47	2,912,207	1.21	38,396,879	.92	.63
Ceylon	93,405	.02	3,114,286	.07	.05	1,010,130	42	7,364,199	.18	.26
French Indochina	2,222,343	.57	47,575,223	1.08	.80	2,638,023	1.09	29,742,298	.72	.61
India and Pakistan	6,710,088	1.72	278,937,325	6.32	6.91	13,535,354	5.61	198,851,003	4.79	4.17
Malaya	7,791,944	2.00	384,851,968	8.72	7.93	41,682,019	17.29	696,641,068	16.77	14.61
Philippines	1,068,772	.27	11,770,268	.27	.44	4,770,748	1.98	8,665,591	1.41	2.22
Thailand	14,215,499	3.66	139,287,544	3.16	4.81	9,452,417	3.92	77,680,394	1.87	2.65
Indonesia	10,113,025	2.59	82,097,352	1.86	2.11	16,403,366	6.80	222,373,745	5.35	3.30
Total S. E. Asia	43,345,569	11.12	953,463,560	21.61	23.52	92,404,264	38.32	1,329,715,177	32.01	28.45
North China (incl. Manchuria)	25,836,740	6 63	297,521,780	6.75	9.39	16,767,026	6.95	513,811,758	12.37	18.23
Middle China (excl. Formosa)	5,005,644	1.28	47,790,725	1.08	3.59	6,056,433	2.52	72,573,334	1.75	9.72
Formosa	3,001,385	.77	57,995,157	1.31		15,631,945	6.48	120,724,567	2.90	
South China	46,787,211	12.00	422,085,501	9.57	9.66	32,769,366	13.59	965,597,710	23.25	11.37
North Korea	—	—	—	—	.61	—	—	—	—	.21
South Korea	217,808	.05	3,708,019	.08	.61	3,042,628	1.26	20,694,468	.50	.62
Total N. E. Asia	80,848,788	20.33	829,101,182	18.79	23.76	74,267,398	30.80	1,693,401,837	40.77	40.15
Total Trade of H.K.	389,904,915	100.00	4,412,807,596	100.00	100.00	241,141,933	100.00	4,153,592,746	100.00	100.00

Hongkong Factories' Progress

Hongkong's industries have made remarkable progress since the war in both the volume of output and the variety of products and in the scope of markets. There are very few corners of the world into which the wide range of Hongkong-manufactured products do not penetrate. Their rapid development was due to a variety of factors: Hongkong is a free port; it was comparatively easy to obtain raw materials, the bulk of which came from the United States; Shanghai factories moved to Hongkong and with them came skilled workers. But although the new and rehabilitated industries flourished in a manner almost startling, difficult days lay ahead. The war in Korea and the consequent aggression by the Chinese communist army precipitated the American embargo. Supplies of raw materials for every large industry were cut off, and factory operators were faced with the problem of finding new sources.

Hongkong's industries have thus suffered in 1951 to a certain extent. That in itself would be bearable if, when the Korean war finally resolves itself, local industries could press on where they left off. But in the interim a serious position has developed. Many of Hongkong's markets have been conquered by countries little affected by the war, and one of these, Japan, who is subsidised with money, machinery and raw materials by America, is becoming the principal rival of local manufacturers.

Raw materials are now easier to procure but there are still shortages. Tin plate for the canning industry is a crying need, and the industry is still suffering from a real shortage. The basis of the hardware industry—especially enamelware—is black sheet, or "tin mill black plate reject" as it is known. But the outlook is brighter with thousands of tons of this material coming through now. From figures given in the UK Parliament, Hongkong required 2,260 tons of blacksheet a month and 1,532 tons of tinplate. Aluminium, steel plates, brass, rubber, copper, lead, chemicals, dyestuffs, pigments and galvanised iron are among the raw materials urgently required, in lesser or greater quantities. A certain wood for pencils has also been unobtainable, with the result that India, Egypt and Burma now get their pencils from Japan. This is one industry that Japan has recently and profitably been able to start. Weaving and knitting industries join the ranks of those hard-hit. Steel needles from US for knitting were suspended, so that for a time the industry remained static. Soon however, necessity resulted in two Hongkong factories springing up to manufacture these needles. Hundreds of small-scale weaving sheds, operating in a spare room or garage with one or two looms, found the soaring cotton yarn prices beyond them, and masses of these workers were forced out of employment. Raw cotton, some of the best and cheapest being American, now comes at a higher price from Pakistan, India, Turkey, Brazil, Egypt and Burma among other places.

There are some 1,800 registered and recorded factories in the Colony—nearly 1,000 of these in Kowloon and beyond, where the Government is developing a special industrial area around Tsun Wan. About 95,000 registered workers are employed in industrial enterprises; the largest unit is in the docks and 31 per cent are in the textile industry. Hardware, though one of the largest industries, employs relatively few workers as so many of the factories own up-to-date and automatic machinery. Although only 46 factories manufacturing rubber products exist, among them they employ 5,871 labourers. Some of these rubber works are quite primitive and a great deal is done by hand. From these figures one can get a rough idea of the scale on which industry operates in Hongkong.

It is interesting to see how, in their building, equipment and amenities for the workers the large factories here compare with those in Britain and other highly industrialised countries. One can claim that some of the torch, plastic, paint, enamelware and especially the cotton spinning mills are as good as any in the world. Complete with air conditioning, canteens, lecture rooms, accommodation and laundry facilities for the workers—these new enterprises join the world-wide move for better ordered and increasingly efficient industry.

The immediate outlook for the Colony's light industries is quite encouraging. The first quarter of 1951 saw 522 new factories registered, providing work for a further 30,000 people. The expansion of light industries continues; they number some 1,800 as compared with between 1,100 and 1,200 ten years ago. By the end of the current year the figure will probably reach 2,200 factories.

HONGKONG COMMODITY MARKETS

The last two weeks (Dec. 24, 1951, to Jan. 5, 1952) have been uneventful from the angle of the commodity markets. The festive mood created by Christmas and the Chinese Winter Solstice holiday, followed by the New Year, was destructive to serious work. Dealings were mainly undertaken by those in need of replenishment of stocks or by such as were obliged to dispose of their goods in order to obtain the necessary funds for the settlement at Lunar New Year, which comes at the end of January.

The difficulties encountered by Hongkong merchants in gauging future requirements and the speculative nature of the market with its dependence upon China, are underlined by the recent failure of a firm dealing in paper, which found itself unable to take up a large cargo of newsprint that had been ordered when prices were considerably higher than those now ruling. Pressure from the mainland has caused prices to fall and this process has been added to by the arrival of shipments ordered in the golden days when prospects seemed favourable. Since then, the small allocation of foreign exchange permitted by the mainland authorities in their endeavour to reduce the existing excess of imports over exports has had an adverse effect upon trade. Losses on the local market as a result of the fall in prices seem inevitable in view of the higher rates at which paper was imported.

The metal market is one of those most affected, not only by the restrictions imposed in Hongkong upon exports to China, but also by the trading policy adopted in China itself. However, the heavy constructional work proceeding in the Colony has given metal interests an outlet, if somewhat limited, in filling the requirements of local users.

As a result of the uncertainty in the future of the paper and metal markets, speculators in these lines are at present conspicuous by their absence.

Review for 2 weeks Dec. 24, 1951, to Jan. 5, 1952:

Cotton Yarn—Over the holidays the market was dull. After the turn of the year, however, the appearance of buyers from Pakistan, Indochina and Taiwan helped to enliven matters. HK 20's were chiefly in demand. At the close prices were: HK 20's $1935/$2000 per bale for spot; Jan. forwards $1950/$1980; Feb. (end) forwards $1900. Egyptian 20's $1790/$1810 per bale. Italian 20's $1745/$1790 per bale and 32's $2400 for spot; Jan. forwards 32's $2280/$2250 per bale. Indian 40's $2430 per bale.

Raw Cotton—Raw cotton prices showed a decline. Pakistan 51/52 NT-roller gin & LSS-r.g. after being quoted at $3.65 per lb. fell to $3.55; 4F-r.g. declined from $3.60 to $3.50; 289F-r.g. fell from $3.80 to $3.70 per lb. Rangoon raw cotton was quoted nominally at $2.50 per lb., Egyptian at $4.55 and Brazilian at $4.30 per lb.

Metals—Nothing occurred to arouse the metals market from its dullness. The prices of Mild Steel Round Bars remained as a result of heavy stocks: European 50' ½" to 1" fell to $50 per picul but without attracting many buying offers; ⅜" declined to $60 and ½" to $56 per picul; 1⅛" & 1¼" were steady at $55/$56 per lb. Mild Steel Plates were in little demand: 4'x8' 1/32" fell to $130 per picul; 1/16" were quoted low at $115; 3/32" fell to $110; ⅛" was offered at $95; the average price of 3/16" to ¼" fell to $88 per picul. Galvd. Iron Sheets showed a decline: G24 sold at 96 cents per lb., G26 at $1 and G28 at $1.40 per lb.; Japanese 3'x7' G31 were offered at

Trade Enquiry for Hongkong Importers from France

Hongkong's importers' enquiries for further particulars should be accompanied by a banking reference and addressed to the French Commercial Counsellor's Office, 601 Jardine House, Hongkong.

French exporters' offers:—

CIE FRANCAISE THOMSON-OUSTON, Paris: Exports in general: Radio-television, Gramophone Records, microfilm, household electric equipment, etc.

ETS. REDING, BROUSSE & CIE., Paris: Algerian Dates.

ETS. P. CREPET-TESTE, Saint-Etienne: Cotton, mercerized and silk ribbons of all kinds, Nylon textiles.

STE A. GERST, Besancon: Voyage articles.

ETS. H. TRAMER, Paris: Axles; Tungsten Electrodes.

Your means of Communication with all The Far East...
CPA
Scheduled Services To SINGAPORE, SIAM, INDO-CHINA, PHILIPPINES, BURMA & BORNEO.
Cathay Pacific Airways
General Agents: BUTTERFIELD & SWIRE
Passage, call 56260, 30331 Freight, call 58940
CH-28

$10.60 per sheet, while G30 3'x6' stood nominally at $9.20 per sheet. Tinplates were dull. British 20"x28" dropped from $303 to $300 per 200-lb. case in spot sales and the Japanese variety fell to $295. Tinplate Waste Waste lacked buyers, 18"x24" coked being marked down from $315 to $310 per 200-lb. unit for both case and tonnage packing; the electrolytic variety 1st quality case packing fell from $295 to $290 per 200-lb. case, while tonnage packing had some sales at $270 per 200-lb. unit. Japanese Black Plate G30 & G31 ranged from $111 to $112 per picul.

Industrial Chemicals—The tight money situation has had a considerable influence on the industrial chemicals market, several dealers being obliged to unload at reduced prices in order to raise the necessary funds for the year-end settlement. At the close, a slight improvement was noticeable in various popular lines. Quebracho Extract sold at $1.10/$1.12 per lb., the price being raised later to $1.15. Japanese Calcium Hypochloride 60% improved from 50 cents to 52 cents per lb. Dutch Acetic Acid in 25-kilo. carboys sold at $1.22 per lb. and Italian Acetic Acid Glacial sold at $1.25 to dealers from Canton. German Amber Petrolatum had brisk sales, rising from 63 cents to 66½ cents per lb. Dutch Lithopone 30% rose to 78 cents, but fell later to 73 cents per lb. German Carbon Black, with heavy shipments arriving, fell to $355 per 145½-lb. case; the US product after selling at $8.50 rose to $8.70 per lb. German Sodium Hydrosulphite in 60-kg. drum was taken by Canton traders at $455 per picul; the Dutch product 250-lb. packing sold at $300 per picul, as compared with the earlier price of $355.

Paper—The state of the paper market is indicated in the recently issued HK Trade Returns. Exports in November only amounted in value to $700,000, as compared with $2.6 million in October. During the past two weeks under review, the inactivity continued on the whole although an attempt was made by dealers to improve prices. Newsprint in roll, 31" 52-gr., Norwegian, was transacted at 76/80 cents per lb., while the Swedish & Finnish products after selling at 71 cents were quoted at 75/76 cents per lb. White MG Cap sold at $16.70/$17 per ream for Norwegian & Swedish quality 17½ lbs. 25x44. Newsprint in ream 31x43 50-lb.. in original packing, improved to $39/$40 per ream, repacked goods being quoted at $38 per ream; the Japanese make, being short of stocks, was offered at $37 per ream. Bond Paper 32-lb. 22x34, unwatermarked, was traded at $39/$40 per ream, while watermarked qual. was quoted nominally at $42/$43 per ream.

China Produce— The low prices offered from abroad continued to affect the China Produce market. Heavy shipments from China, in an endeavour to offset the large import balance as well as the tight money situation, also caused a decline in prices. Towards the close, imports from China fell off. Woodoil (Tung Oil) was purchased by European and S. African interests at £260 per long ton c. & f. Europe and £278 c. & f. S. African port; the local market price for processed qual. in bulk was nominally $237.50 per picul. The European buying offer for Teaseed Oil was £178 per long ton c. & f; local rates were $176 and $170 per picul respectively for 3% & 5% ffa. Aniseed Oil, unprocessed, sold at $780 per picul and was quoted nominally at $830 per picul for export quality. Cassia Oil was quoted nominally at $1640 per picul for 80/85% c.a. and $1750 for export qual.

Cassia Lignea remained dull, the 1-cwt. bale 1st qual. being quoted nominally at $93 per picul and the 80-lb. bale at $90 per picul. Cassia Unscraped sold at $89 per picul. Aniseed Star showed an improvement in price, being quoted at $270 for Nanning 1st qual. and $300 per picul for export qual. Gallnuts were lowered by sellers to $90 for 1st qual. and $81 for 2nd qual., without arousing buying interest.

FINANCIAL REPORTS

SINGAPORE SHARE MARKET

Market activity, quite unusually at this season, was maintained in the three and a half business days before and after Christmas. Industrials contributed some sizeable transactions but in Rubbers sellers were not inclined to meet the lower bids prevailing and turnover was small. Tins were the most buoyant section and here the market continues to back the contention noted be us three weeks ago. This was the belief that in the end Washington must come to Singapore to get adequate supplies of Tin. In the interim it is the United States which is the greatest sufferer from the dollars vainly spent, thousands of hours of official time wasted and the unworthy stratagems employed in attempting to avoid paying the world price.

In Loans buyers were inclined to await lower offerings in view of the announcement of the closing of the Singapore City 3¾% with the amount subscribed some six millions short of target after the lists had been open for four months.

A retrospective glance may now be fitting. 1951 has seen a larger volume of business on Malayan markets than ever before and Company results have also exceeded anything in the past. But both in Market and in Board Room the soberest counsels have prevailed. The transience of the year's extraordinary conditions has been recognised and the uncertain future fully discounted in market prices and dividend distributions. Private enterprise, never relaxing its efforts in gleaning and garnering, has provided for the difficult days ahead, making appropriate reserves, while spending generously towards greater efficiency and at the same time has contributed tremendous sums to Government in taxation. Nowhere in commerce have we found the piling on of personnel and initiation of grandiose schemes which has been notorious in Government during the Attlee administration. In fairness to the Singapore Treasury however, we have noted a certain deliberation and a measure of prudence in carrying out expensive directives from Whitehall. It now remains to be seen how far the business like methods of Mr. Lytte'ton can curb the naturally expansive tendencies of bureaucracy in the Colonial Office.

BUSINESS DONE. 22nd—28th December.

Industrials. Fraser and Neave $4.07½, Gammon $2.75, Malayan Breweries $5.10, Malayan Cement .55 to .57 cents. McAlister $40.50, Robinson $3.90, Straits Times $3.95, Straits Trading $22.00. Henry Waugh $2.70, Wearne $5.20 ex. div., William Jacks $3.50.

Tins. Hong Fatt $1.27, Jelebu $1.30, Kesang $1.42½ c.d., Petaling $6.50 to $6.75, Rantau $3.55, Taiping $2.17½ to $2.20.

Austral Amalgamated 14/7½ to 15/-. Austral Malay 39/6, Jelepang 41/- Kampong Lanjut 35/6 to 38/6, Kuala Kampar 40/- to 40/9, Larut 15/3, Rawang Tinfields 9/3. Pahang Consolidated 16/4½, Pattani 1/5½.

Gold. Raub $2.42½ **Diamonds.** De Beers Deferred 70/6.

Rubbers. Amalgamated Malay $1.37½, Gleneagly $1.75, Mentakab $1.77½, Tapah $2.20, Ulu Benut .61 cents, United Malacca $2.00.

Overseas Investments. Home Heineman Holdings 10/4.

Australians. Mount Lyell 23/9 to 23/6, Winterbottom 30/10½ both Australian currency.

COMPANY REPORTS:—

Malacca Electric Lighting Limited. Liquidator's account at 30.9.51 showed cash at $197,367 (23 cents per share) but no further distribution to shareholders is possible until the Company's Tax liability is determined. Land and buildings at Malacca—leased until June 1952—remain to be realised and the War Damage award is still awaited.

Sandycroft Rubber Company Limited. Is to hold an Extraordinary Meeting on 19/1/52 when shareholders will be asked to authorise disposal of the Estate. Directors have made confidential recommendations to shareholders regarding an offer they have received.

Utan Simpan Rubber Company Limited. Directors have accepted a bid for the estate and an Extraordinary Meeting will be held shortly for purpose of appointing Liquidators to wind up the Company.

Ulu Pandan (Singapore) Rubber Estate Limited. Incurred a net loss of $2,340 for the year ended 30/9/1951. Net liquid assets show in Balance Sheet at $437,695 or $1.17 per share. 7.83 acres of land was sold during the year and a surplus of $87,757 shown thereon. Since the end of the year Company has agreed to sell 50 acres more at just over 50 cents per sq. ft. When proceeds of this sale are received Directors will propose that Company be placed in liquidation.

MALAYAN TIN DREDGING LIMITED. Net profit for the year ended 30/6/51, £64,921 (32.4%), was derived entirely from interest and dividends. 25% was distributed. No. 5 dredge exhausted virgin dredgeable land at Batu Gajah and worked through to redredge tailing left by Japanese. After drydocking for repairs No. 6 dredge worked tailings on the Ipoh Tin sub-lease for eight months. No 2A Dredge commenced normal production in May on new land at Kampong Gajah. Net liquid assets in Balance Sheet before Rehabilitation Loan were £153,178 or 3/9¾ per share.

SOUTHERN MALAYAN TIN DREDGING LIMITED. Operated six dredges throughout year ended 30.6.1951 for a net profit of £951,979 (220%) after British Profits Tax and dividends totalling 100% were paid. Net liquid assets at £1,104,683 are equal to 12/9 per share. A seventh dredge is to be rehabilitated and equipped with grabs in place of its bucket line. Out of 5,211 acres leased 2,320 acres have been dredged. 174 acres were worked over during the year.

PATTANI TIN LIMITED. Dredge was silent through the year ended 31.3.51 and a loss of £8,655 incurred. Net liquid assets in Balance Sheet work out at £34,805 or 1/0¼ per share. No decision has been reached by the Board regarding future operations but certain negotiations are proceeding.

KAMRA TIN DREDGING LTD. Made only £2,059 (¾%) in the year ended 31.3.51 This figure was arrived at after charging £39,000 for replacements and repairs. Net liquid assets add up to £32,170 including £7,602 balance of war damage compensation received after the end of the year.

The Chairman did not reveal any concrete proposals for the future operation of the dredge which is nearing the end of its ground at Kamra. The Company owns a concession, acquired in 1933, situated 75 miles away. The dredge could proceed to this area by sea but a number of difficulties will attend such a move.

TEMOH TIN DREDGING LTD. Tribute from operations by gravel pumps brought a profit of £37,697 (26.9%) in the year ended 30th June 1951. A dividend of 12½% has been paid. Net liquid assets at £90,711 are equivalent to 12/11d per share.

HONGKONG SHARE MARKET

Rates were almost unchanged but the undertone continued firm. Sales were on a high level. Inquiry is steady. Reports about favorable working results of companies during last year are frequent. Dividend time will be no disappointment for investors.

The current week opened at the following quotations:—

H.K. GOVT. LOANS	
4% Loan	98¼
3½% ,, (1948)	94
BANKS	
H.K. & S. Bank	1635
Bank of East Asia	135
INSURANCES	
Canton Ins.	235
Union Ins.	800
China Underwriters	5.30
H.K. Fire Ins.	145
SHIPPING	
Douglases	150
U. Waterboats	25
Asia Nav	1½
DOCKS, WHARVES, GODOWNS, ETC.	
H.K. & K. Wharves	102
North Point Wharves	6.80
Sh. Hongkew ,,	6
H.K. Docks	17¼
China Providents	13.70
S'hai Dockyards	3.90
Wheelocks	38½
MINING	
Raub Mines	4.35
H.K. Mines	1½c
LANDS, HOTELS & BLDGS.	
H. & S. Hotels	5.80
H.K. Lands	57¾
S'hai Lands	1¼
Humphreys	14½
Chinese Estates	114
PUBLIC UTILITIES	
H.K. Tramways	17
Peak Trams (F. Pd.)	23½
,, (Partly Pd.)	11½
Star Ferries	115½
China Lights (F. Pd.)	8.90
,, (Partly Pd.)	6.15
H.K. Electrics	23¼
,, (Bonus Sh.)	21¾
Telephones	15
INDUSTRIALS	
Cements	17½
H.K. Ropes	22½
STORES &c.	
Dairy Farms	19.10
Watsons	26¼
L. Crawfords	35¼
Sinceres	3.10
MISCELLANEOUS	
China Entertainments	17
International Films	85c
H.K. Constructions (Fully Pd.)	3
,, (Partly Pd.)	1½
Vibro Pilings	15¾
S'hai Loan	1.40
Yangtsze Finance	4.10
COTTONS	
Ewos	3.80
RUBBER COMPANIES	
Anglo-Dutch	2
Anglo-Java	40c
Ayer Tawah	4¼
Bute Plantation	4.10
Consolidated Rubber	5.10
Dominion Rubber	3½
Java Consolidated	65c
Kota Bahroe	3.30
Kroewoek Java	82½c
Langkat	1¼
Rubber Trust	3.90
Shanghai Kedah	9.60
Shanghai Kelantan	1.20
Shanghai Pahang	2.60
Shanghai Sumatra	8½
Sua Manggis	7½c
Sungala	2¾
Sungei Duri	5.10
Tanah Merah	1.45
Ziangbe Rubber	4

Published and edited by ERIC E. HALPERN for and on behalf of The Far Eastern Economic Review Ltd., at 322, Queen's Building, Victoria, Hongkong.—Telephone: 32429. Cables: Ficom.

The Far Eastern Economic Review is published weekly.

Printed by **Graphic Press Ltd.**, Hongkong

• • •

Annual subscription rate: $80. Overseas $90 or £5.10. - or US$15.50.
Price per single copy: $1.60

Gibb, Livingston & Company, Limited.

Established 1836.

P. & O. Building, Hong Kong. Tel. Add: "GIBB"

IMPORTS

TEXTILES & YARNS OF ALL CLASSES, RAW COTTON, RUBBER, COAL, TIMBER, CHEMICALS AND DYES, LINSEED OILS, LITHOGRAPHIC VARNISHES, FOODSTUFFS AND PRODUCE, METALS, SUNDRIES.

EXPORTS

CHINA PRODUCE, COTTON PIECEGOODS, MADE UP GARMENTS, RUBBER FOOTWEAR, EGG PRODUCTS, HOG CASINGS, ESSENTIAL OILS, GINGER, MANUFACTURED GOODS, TEA.

SHIPPING:

BURNS, PHILP LINE

INSURANCE:

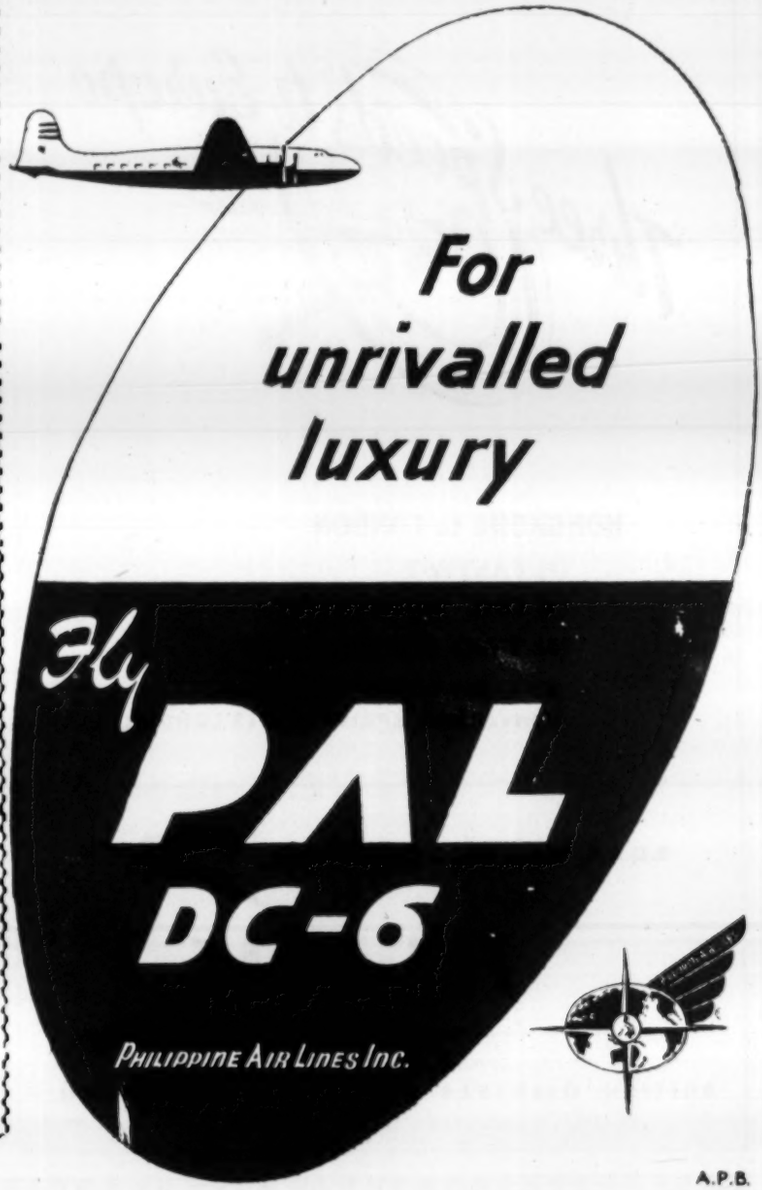
PHOENIX ASSURANCE COMPANY, LIMITED.
NORTHERN ASSURANCE COMPANY, LIMITED.
NORTH CHINA INSURANCE COMPANY, LIMITED.

WINES & SPIRITS:

TENNENT'S BEER
SCOTTISH CREAM WHISKY
BERTRAM'S WINES.

SUNDRIES:

BITULAC PAINTS.



A.P.B.

GILMAN & CO. LTD. 1841 HONGKONG

ESTABLISHED 1841

GILMAN & COMPANY LTD.

- MERCHANTS
- SHIPPING AND INSURANCE
- LLOYD S AGENTS

HEAD OFFICE: 4A DES VOEUX ROAD, CENTRAL, HONG KONG. CABLES: GILMAN HONG KONG.

HONGKONG to LONDON

(1) FASTEST
(2) ONE NIGHTSTOP
(3) TWO NIGHTSTOPS

NO EARLY RISING HONGKONG!
CONVENIENT ARRIVAL TIMES LONDON

B.O.A.C. TAKES GOOD CARE OF YOU

FLY BY B·O·A·C

Information & Bookings: Consult your usual Travel Agent or Jardine, Matheson & Co., Ltd. (General Agents in H.K. & China), 14-16 Pedder St. H.K., Tel. 27765-6, 1 Peninsula Arcade, Kowloon., Telephone 59161-2-3.

BRITISH OVERSEAS AIRWAYS CORPORATION

Union Commerciale Belge de Metallurgie
"UCOMETAL"

PHONE: 35884. TELEGRAMS: "UCOMETAL"
303 Edinburgh House.

Export Sales Office of:
John Cockerill
Forges de la Providence,
Sambre et Moselle.

Pig Iron
Semi - finished and
Finished Steel Products.

BELGIAN SALES AGENCY
"F. De Jong"

PHONE: 35884. TELEGRAMS: "DEJON"
303 Edinburgh House.

Manufacturers' Representatives.

F.I.B. V.B.N. DELEGATE

Window Sections & Sash Bars.
Wires - Wire Netting - Steel Wool.
Galv' Sheets - Plain - Ondulated.
Wood Screws - Iron & Brass.
Zinc: Ingots - Sheets - Oxyde.
Copper & Brass: Rods - Sheets - Wire.
Window Glass: any thickness.
Printed - Figured - Wired Glass.
Blankets - Cellophane - Cement - Paper.

WHEELOCK MARDEN & COMPANY, LIMITED

701 - 707 Edinburgh House, Hong Kong

FINANCE
SHIPPING
SHIPBUILDING
SALVAGE
REAL ESTATE
MERCHANDISING
INSURANCE
WAREHOUSING
AVIATION
MOTOR VECHICLES

HONG KONG • LONDON • JAPAN • SHANGHAI

DODWELL & CO., LTD.

Founded 1858

BARBER LINE

FROM U.S. ATLANTIC & PACIFIC COAST PORTS

m.v. "TRAFALGAR" .... Due Hongkong 10th Jan.

BARBER WILHELMSEN LINE

TO PACIFIC & ATLANTIC COAST PORTS
via JAPAN

m.v. "TITANIA" .... Due Hongkong 19th Jan.
m.v. "GLENVILLE" .... „ „ 4th Feb.
m.v. "TUDOR" .... „ „ 18th Feb.
m.v. "TRAFALGAR" .... „ „ 4th Mar.

Accepting cargo on through Bills of Lading for transhipment cargo to South American and West African Ports.

AUSTRALIA WEST PACIFIC LINE

TO BRISBANE, SYDNEY, MELBOURNE via RABAUL

m.v. "CITOS" .... 13th Jan.

Accepting cargo for transhipment to Fiji
FROM MELBOURNE, SYDNEY
& BRISBANE

m.v. "AROS" .... 5th Feb.

STATES STEAMSHIP COMPANY

PACIFIC SERVICE
FOR VANCOUVER DIRECT THENCE
SEATTLE & PORTLAND

LLOYD TRIESTINO

FOR SINGAPORE, COLOMBO, BOMBAY, KARACHI,
ADEN, SUEZ, PORT SAID, VENICE, TRIESTE,
LEGHORN & GENOA

m.v. "U. VIVALDI" .... Due Hongkong In Port
m.v. "S. CABOTO" .... „ „ 26th Feb.

CANADA-ASIATIC LINES LTD.

All the above subject to alteration without notice.

BOOKING AGENTS FOR:
CUNARD STEAMSHIP CO., LTD.
B.O.A.C. —
CANADIAN PACIFIC — QANTAS —
P.A.L.
3rd FLOOR HONGKONG & SHANGHAI BANK BLDG.
DES VOEUX RD. TELEPHONE 28021/6

JARDINE, MATHESON & CO., LTD.

14/18, PEDDER STREET,
HONG KONG

HONG KONG, CHINA,
JAPAN & KOREA

Importers and Exporters,
Tea and General Merchants,
Insurance, Shipping and
Air Transport

GENERAL MANAGERS:

The Indo-China Steam Navigation Co., Ltd.
The Australia China Line Ltd.
The Hong Kong Fire Insurance Co., Ltd.
Hong Kong Airways Limited
Jardine Aircraft Maintenance Co., Ltd.
Ewo Breweries Limited
Ewo Cotton Mills Limited

GENERAL AGENTS:

The Canton Insurance Office Limited
British Overseas Airways Corporation
Shanghai & Hongkew Wharf Co., Ltd.

AGENTS:

The Glen Line Limited
The Royal Mail Lines Limited
The Prince Line Limited
The Western Canada Steamships Limited
The Pacific Transport Lines, Inc.
Furness Withy & Co., Ltd.
The Union Castle Mail Steamship Co., Ltd.
Alliance Assurance Co., Ltd.
Atlas Assurance Co., Ltd.
Queensland Insurance Co., Ltd.
Guardian Assurance Co., Ltd.
Bankers and Traders Insurance Co., Ltd.
Triton Insurance Co., Ltd.
Lombard Assurance Co., Ltd.
Economic Insurance Co., Ltd.
The Employers' Liability Assurance Corp., Ltd.
The Merchants' Marine Insurance Co., Ltd.

THE JARDINE ENGINEERING CORPORATION LIMITED.

MAERSK LINE

Managed by

A.P. MOLLER, COPENHAGEN

Fast Fortnightly Service to:

NEW YORK, BOSTON,
BALTIMORE & PHILADELPHIA
via
SAN FRANCISCO, LOS ANGELES & PANAMA

Accepting transhipment cargo for Central and South American Ports, also for Caribbean and Gulf Ports

Next Sailings:

m/s "GRETE MAERSK"	Jan.	18
m/s "OLGA MAERSK"	Feb.	2
m/s "JEPPESEN MAERSK"	Feb.	13

Also accepting cargo for Keelung and Japan
Special Strongroom Compartments
Refrigerated Cargo Space

Arrivals from U.S.A.

m/s "OLGA MAERSK"	Jan.	8
m/s "JEPPESEN MAERSK"	Jan.	12
m/s "HULDA MAERSK"	Jan.	20

For Freight and Further Particulars
Please apply to:—

JEBSEN & CO.

Agents

Pedder Building. Tels. 36066-9

GORDON, WOODROFFE & CO. (FAR EAST) LTD.

Edinburgh House, Hong Kong.
Cable Address: "WOODROFFE" H.K.

BRANCH OFFICES

TOKYO and OSAKA

PRODUCE & GENERAL MERCHANTS

General Managers for:

Pekin Syndicate Ltd., Hongkong

Associated Companies:

Gordon, Woodroffe & Co. Ltd., London (Established 1868)
Gordon, Woodroffe & Co. (Madras) Ltd.
Gordon, Woodroffe Morocco, S.A.R.L. Casablanca
Gordon, Woodroffe Corporation, New York

Sole Agents:

Biddle Sawyer & Co., Ltd., London
Gale, Baiss & Co., Ltd., London
Gordon Woodroffe Leather Manufacturing Co.
Sissons Paints
Hugh Wood & Co.,
Richemont Brandy
Goodyear Tyre & Rubber Co. (Rubber belting, Shoe heels, etc.)
L.G. Harris & Co., Ltd. (Paint Brushes)
Ransomes Sims & Jefferies Ltd. (Electric Trucks & Tractors)

Engineering & Contracting Department:—

(Successors to William C. Jack & Co. Ltd.)

Agencies:—

Omega Lampworks Ltd.
T.M.C. Harwell (Sales) Ltd.
Atlas Metal & Alloys Ltd.
Edward Wilcox & Co. Ltd.
S.L.R. Electric Ltd.
Aron Electricity Meter, Ltd.
Premier Electric Heaters Ltd.
J.J. Tucker & Co. Ltd.
Smart & Brown (Engineers) Ltd.
Holophane Ltd.
Greenwood & Hughes Ventilating Co.
Wolsall Conduits Ltd.
Sheffield Wire Rope Ltd.
Ocean Oil Ltd.

GRANT